Incidence of child labour in Indonesia: Determinants, trade-off between work and school, non-leisure time allocation and son preference.

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ABSTRACT

This thesis explores the determinants of child labour in Indonesia. The analysis is extended to examine how child, household and community characteristics impact child labour and school attendance in 33 provinces in Indonesia. By using individual-level data from the Indonesia National Socioeconomic Survey (SUSENAS) of 2005 and 2007 developed by Statistics Indonesia, this thesis compares the nature and determinants of child labour and/or school attendance over two years of survey by probit and bivariate probit models. Using the same datasets, this thesis also examines the determinants of children's work and/or schooling by implementing multinomial logit models. The gender gap observed among male and female children in work might reflect the existence of son preference in a family. Thus, to investigate son preference, multiple classification analysis (MCA) and tobit models were implemented on the Indonesia Family Life Survey (IFLS4), which was conducted in 2007. The decisions whether to send children to work or to school is made by the household, which trade-offs expected present and future benefits and resource distribution among all of its members, including older children, under the current resource constraints. Therefore, the process and conditions where a child stops attending school vary at different points of time even for a single child, and certainly differ among siblings in the same household. Economic, socio-cultural and demographic factors affect a child's status. Low-income households send some or all of their children to work, which is supported by the Luxury Axiom proposed by Basu and Van (1998). Biological children are sent to school rather than work, and they are less likely to become 'idle' children. Parent's education, household size, birth order and sibling compositions significantly reduce child labour and children in neither work nor school category. In contrast, children are more likely to go to school and combine work and school. Land ownership shows a weak effect on child's status, and the availability of basic services help reduce the probability of working and increasing the probability of schooling. The gender gap observed among boys and girls may reflect the existence of son preference in a family, and this is confirmed by the findings of the MCA analysis on the married women aged 15-49 years. Although it cannot be concluded that son preference was also observed in the incidence of child labour, the gap in the number of hours spent on household chores and market work was explained by gender differences.

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LIST OF ABBREVIATIONS

BIMAS	The Mass Guidance Scheme
BPS	Central Bureau of Indonesia
CASS	Chinese Academy of Social Sciences
CLR	Child Labour Regulation
DHS	Demographic Health Survey
DIY	The Special Region of Yogyakarta
DKI JAKARTA	Special Capital City District of Jakarta
EBTANAS	National Final Phase of Study Evaluation
EoCA	Employment of Children Act
FFE	Food for Education
GDP	Gross Domestic Product
GRDP	Gross Regional Domestic Product
Ha	Hectares
ICLS	Indonesia Child Labour Survey
IDR	Indonesia Rupiah
IFLS	Indonesia Family Life Survey
IIA	Irrelevant Alternatives
ILO	International Labour Organization
ILO-IPEC	International Labour Organization-International Programme on the Elimination of Child Labour
IPEC	International Programme on the Elimination of Child Labour
I-PRSP	Interim-Poverty Reduction Strategy Paper
IV	Instrumental Variables

MCA	Multiple Classification Analysis
MICS	Multiple Indicator Cluster Survey
MONE	Ministry of National Education, Indonesia
MoRA	Ministry of Religious Affair, Indonesia
MOSA	Ministry of Social Affair, Indonesia
MxFLS	Mexican Family Life Survey
NAD	Nanggroe Aceh Darussalam
NFHS	National Family Health Survey
NGO	Non-Governmental Organisations
NLSS	Nepal Living Standard Survey
NLSS	Nepal Living Standard Survey
NSSFC	National Sample Survey on Fertility and Contraception
OAP	Old-Age Pension
OLS	Ordinary Least Square
RPJM	Medium-Term Development Plan
SAKERNAS	The National Labour Force Survey
SNPK	National Strategy Poverty Reduction
SUR	Seemingly Unrelated
SUSENAS	The Indonesia National Socioeconomic Survey
UAN	National Final Examination
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNICEF	The United Nations Children's Fund
USD	United States Dollar

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CHAPTER 1: INTRODUCTION

1.1 A History of Child Labour

Child labour became a major issue in the early days of the Industrial Revolution in the 19th century and, more recently, the number of children involved in child labour has risen to 300,000 over the past decade[1]. The incidence of child labour was firstly found in industries with power-driven machines that made most manufactured items in the mid-1800s, where factories began to use children to run their machines. Children had to work for 12 to 18 hours per day, six days a week, by tending machines in spinning mills, working underground or hauling heavy loads[2]. Children were used to move in small spaces in factories or mines where adults could not fit. As a result, accidental injury at work was common particularly among children. In Europe and North America, between 20 and 30 percent of children sustained such injuries, which ranged from minor cuts, burns, bruises, broken limbs, and even fatalities occurred (Hobbs et. al., 1999). The injuries mostly affected children engaged in the agricultural sector and were mainly related to the use of toxic pesticides. Furthermore, children were exploited in factories because they were thought to be easier to manage and control and most importantly, children were typically paid less than adults.

Most of the children came from poor families and had no time to play or attend school, and they also had little time to rest. During the Industrial Revolution, children as young as four were found working in dangerous and fatal working environments. In addition, it was found in America that about 1.7 million children below the age of fifteen were

[1] International Programme on the Elimination of Child Labour, "Every Child Counts: New Global Estimates on Child Labour," April 2002.
[2] Fried, M. (n.d.).'A History of Child Labour'. Retrieved January 26, 2014 from www.scholastic.com/teachers/article/history-child-labour

working in industries by 1900[3]. Large numbers of them were working in mines, textiles, glass factories, home industries, agriculture, canneries, and as newsboys, bootblacks, messengers and peddlers. In 1788, more than 60% of working children were found in the textile mills in England and Scotland[4], and the worst forms of child labour involved children being used in the military, child trafficking, begging and prostitution. The first two Factory Acts were implemented in 1802 and 1809, in which the acts limited the number of working hours that were allowed in a day. However, the acts had very little immediate effect. Only after many years of efforts to outlaw child labour, the numbers tended to decline in the early decades of the 20th century due to the growth of the labour and reform movements and improvements in labour standards.

1.2 Incidence of Child Labour: Worldwide

The International Labour Organization (ILO) Global Report on Child Labour of 2006 estimated that there were about 317 million economically active children aged 5-17 in 2004. Out of the total number, 218 million were regarded as child labourers, and approximately 58.8 percent of the child labours were engaged in hazardous work. The terms *'economically active'*, *'child labour'* and *'hazardous work'* are based on the definition given by the ILO (2006, pg. 6) as follows:

> *'Economic activity* is a broad concept that encompasses the most productive activities undertaken by children, whether for market or not, paid or unpaid, for a few hours or full time, on a casual or regular basis, legal or illegal; it excludes chores undertaken in the child's own household and schooling. To be counted as economically active, a child must have worked for at least one hour on any day during a seven-day reference period'.

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[3]Wagner (2002). 'The History of Child Labour during the American Industrial Revolution'. Retrieved August 22, 2013 from http://ihscslnews.org/view_article.php?id=95

[4]Bylund, L. (2010). 'Origin and Causes of Child Labour and its Possible Solutions'. Retrieved January 27, 2014 from http://www.gandhiforchildren.org/origin-and-causes-of-child-labour-and-its-possible-solutions.html

'*Child labour* is a narrower concept than 'economically active children', excluding all those children aged 12 years and older who are working only a few hours a week in permitted light work and those aged 15 years and above whose work is not classified as hazardous'.

'*Hazardous work* is any activity or occupation that, by its nature or type, has or leads to adverse effects on the child's safety, health (physical or mental) and moral development. Hazards could also derive from excessive workload, physical conditions of work, and/or work intensity in terms of the duration of hours of work even where the activity or occupation is known to be non-hazardous or safe'...(page 6).

In addition, about 191 million younger children (aged 5-14 years) were economically active, 166 million were child labourers and 74 million were regarded doing hazardous work. However, the incidence of child labour aged 5-17 years has declined, where an estimated of 13.9 percent in 2004 compared to 16 percent in 2000. In particular, the number of child labourers had declined by 11 percent in both age groups of 5-14 years and 15-17 years between 2000 and 2004. In terms of gender, boys were found to be more exposed to child labour, particularly work of a hazardous nature, compared to girls.

Table 1-1: Global Trend in Children's Economic Activity by Region, 5-14 years, 2004-2008

Region	Child Population (million)		Children in Employment (million)		Child Activity Rate (%)	
	2004	**2008**	**2004**	**2008**	**2004**	**2008**
Asia and The Pacific	650.0	651.8	122.3	96.4	18.8	14.8
Latin America and the Caribbean	111.0	110.6	11.0	10.0	10.0	9.0
Sub-Saharan Africa	186.8	205.3	49.3	58.2	26.4	28.4
Other regions	258.8	249.2	13.4	10.7	5.2	4.3
Total	1,206.5	1,216.9	196.0	176.5	16.2	14.5

Source: ILO (2008).

Table 1-1 gives the trend of children in employment by region in 2004 and 2008. However, regional trends that are given by the ILO are limited to children in the age group 5-14 years since the previous regional estimates did not cover children aged 15-

17 years. In terms of region, Sub-Saharan Africa reported the highest rate of child labour in both years. The lowest rate of children in employment was in the other regions. The rate decreased by almost 1 percentage point in 2008 compared in 2004. In addition, in Sub-Saharan Africa, the numbers of children in employment shows a great increase from 49.3 million in 2004 to 58.2 million in 2008, corresponding to an increase in the activity rate by 2 percentage points.

The factors that cause child labour are closely related. According to ILO (2007), there are five key factors. The first three are considered as supply factors such as poverty, education and social norms. The other two are the demand from parent's farms or businesses and demand from other businesses, which are related to the demand for child labour. The powerful determinant of child labour that has been discussed widely is poverty, which is generally related to household income (Patrinos and Psacharapoulos, 1995; Patrinos and Psacharopoulos, 1997; Ray, 1998; Grooteart, 1998; Cartwright, 1999; Cartwright and Patrinos, 1999; Akarro and Mtweve, 2011; Edmonds and Schady, 2012). In particular, parents send their children to work because the family has low income and needs extra money, which the children can provide. In addition, war, natural disasters, migration, economic recession, high fertility and sickness or death of a breadwinner can also cause an increase in child labour. Instead of working, an alternative to working is attending school. For parents who find it difficult to send their children to school (cannot afford schooling costs), children stay away from school and end up working for the family or for others. Apart from that, adequate quality of schooling ensures that students learn something (Coulombe, 1998; Rosati and Rossi, 2007; Bezerra et al., 2009). Thus, this will attract parents to feel that education will increase their child's prospect of securing a good job due to the nature of job market. Therefore, parents will be more motivated to send their children to school. In terms of

social norms, in societies where social stigma is high, parents are influenced by their neighbours to keep their children in work and away from school, and vice versa. These may also lead to gender biases in child labour. In other words, in many societies where domestic chores are considered as child labour, girls work more hours than boys.

On the demand side, many children are found working for their parents. They do household chores, which allow parents to work on their farm or do other work, or else, they are also asked to work in a family business or farm to reduce or avoid the cost of hiring other labours. In addition, businesses also hire children to keep costs as low as possible because children are paid less than adults.

These work patterns prevent a child from getting an education, which inhibits the child's future earning capacity. The ILO estimates that a person's income is 11% higher for each additional year of schooling (ILO, 2007). Thus, the earlier a child begins to work, the higher is the penalty that a child pays in terms of lower adult earnings (Emerson and Souza, 2003). Children may also combine work and school since families rely on the income they earned to survive. Thus, this may have a greater impact on children's schooling attainment (Ray and Lancaster, 2003; Gunnarsson et al.; 2006; Watson, 2008). Since child labourers are commonly from poor families and they are prevented from obtaining education, child's involvement in working means that they may perpetuate poverty from one generation to the next generation (Basu and Tzannatos, 2003). In addition, children are also exposed to high-risk work hazards that may affect their health due to lack of safety and health training, as well as inadequate or harsh supervision at the workplace.

A lot of effort has been adopted and implemented to prohibit the employment and work of children at the national and international level. In spite of this effort, child labour

continues to exist on a massive scale, particularly in developing world. Since child labour is an immensely complex issue, factors such as reasons for children working in the first place and real opportunities that exist for children to leave work and integrate into schools need to be addressed. Thus, direct policies on eradicating child labour can be designed which break the poverty cycle by investing children with skills and education for a better future.

1.3 Dimensions of Child Labour in Indonesia

The involvement of under-age children in the workforce in Indonesia had existed before the Dutch colonised the country. Most of these children were found in traditional industries and agricultural sectors. In the 1920s and 1930s (under Dutch Colonial rule), children aged below 15 years were involved in the traditional batik, *kretek*[5] cigarette, hand-woven textiles and agro-processing industries. The tasks assigned to boys and girls were different. Girls were engaged in refined batik drawing, yarn preparation, making and packaging of cigarettes and arranging final products. On the other hand, boys were doing physical work such as operating hand looms, dyeing and storage, and trimming cigarettes alongside girls. Since the opportunities for education were limited during the Dutch Colonial rule in Indonesia, around one third of children were engaged in economic activities outside agriculture; those children who were engaged in some agricultural work were on a part-time basis. After 1945, industrial goods were still produced on a small scale, and the handmade *kreteks* were still utilising labour-intensive methods. As a result, the structure of children's work changed very little. Only half of all primary school-age children were enroled in school during the *Soeharto* government

[5]*Kretek* are cigarettes made with a blend of tobacco, cloves and other flavors, which are widely smoked form of cigarettes in Indonesia, where 90% of smokers usually smoke *kreteks*.

that took over in 1965. Thirty years later, in 1995, significant changes occurred, where the gross enrolment rates of primary education reached close to 100%. Secondary enrolments reached almost 50% of all children by the mid-1990s. This is due to the successful family planning programme that was introduced in the late 1960s. Specifically, from 4-5 children per household in the early 1970s, the number dropped to 2-3 children on average per household in the mid-1990s. During that time, per capita incomes more than tripled and poverty declined from over 50% in the mid-1970s to just over 10% in 1996. These conditions increased the households' ability and capacity to support school fees and expenses, which significantly eliminated the needs of children to work with the intention to help their parents meet basic needs.

On the demand side, two-thirds of all working children in the mid-1970s were found working in the agricultural sector. The jobs provided had decreased to only just over 40% of all jobs in 1997. Similar conditions were observed with all employment in the large and medium-scale industries. However, most of the children are still engaged in non-agricultural activities, primarily in manufacturing and trade. Labour force participation rates among children aged 10-14 years had declined from the mid-1970s, and then increased again in 1998, which was affected by the economic crisis. The numbers of working children in urban areas has increased since much factory work were found in the new export-oriented industries in the mid-1990s. The economic crisis in 1997 worsened the condition, especially among poor and also middle-class families. Some households had to cut back on certain spending to be able to maintain their children at school. For the heads of households that lost their jobs, their conditions were more severe. If they could not find alternative sources of income, they would be forced to take their children out of school and send them to work to help meet the household needs (Manning, 2000).

Generally, children's employment in Indonesia is not exclusively a rural phenomenon. The number of children's involvement in employment aged 7-14 years is almost 2 million compared to only 386,000 in urban areas[6]. In all, 96% of children in employment work within the family[7]. In addition, 44% of all children in employment are exposed to a hazardous condition. Almost all of these children are also illegal child labours in accordance to Indonesian legislation. The number of older children, aged 15-17 years in employment was much higher, about 3.3 million in absolute terms[8]. Moreover, 87% of children in employment also attend school, and on average they lag nine percentage points behind their non-working peers in terms of school attendance. They also lag behind their non-working counterparts in terms of grade progression due to poor performance[9]. Also, there are large numbers of out-of-school children in Indonesia. This is due to the demand of work. About two-thirds of out-of-school children work in some form of productive activities such as employment[10].

The estimates by ILO that are given in Table 1-1 put the number of child labourers higher in Asia and the Pacific region. The financial crisis in 1997/1998 raised fears of a worldwide economic meltdown due to financial contagion, and Indonesia, South Korea and Thailand were the countries that were most affected by the crisis. In Asia and the Pacific region, the discussion on the incidence of child labour has been focused in India, including Bangladesh and Pakistan (Cain, 1977; Basu, 1999; Ray, 2001a; Ray, 2001b; Levisonet al, 2001; Khanam, 2005; Shafiq, 2007; Mukherjee and Das, 2008) and also Philippines (Jennings, 1999; Sakellariou and Lall, 2000). Children in India and

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[6] Understanding Children's Work and Youth Employment Outcomes in Indonesia. Retrieved July 25, 2014 from http://www.ucw-project.org/attachment/Child_labour_ Youth_employment _Indonesia 20120625_162630.pdf
[7] *Ibid.*
[8] *Ibid.*
[9] *Ibid*
[10] *Ibid.*

Bangladesh manufacture 20 different types of products in India, while children in Philippines produce agricultural products and are also subjected to child pornography[11]. In Malaysia, the current data on child labour are confidential and limited. In Indonesia, the data are available; however, previous literature has a little emphasis on child labour in Indonesia relative to other countries. Even though the number of child labour in Indonesia is not higher as in India, this incidence can lead to social vulnerability, which can permanently impair productive potential and therefore influence lifetime patterns of employment and pay.

Furthermore, being located on the Pacific Ring of Fire[12], Indonesia has to cope with the constant risk of volcanic eruptions, earthquakes, floods and tsunamis for years. Particularly, there is at least one significant volcano eruption in Indonesia every year[13], which was first started by the Tambora eruption in April 1815 in Sumbawa. The biggest threat, earthquakes in Indonesia, happens almost on a daily basis in Indonesia but usually causes no or little damage. The worst effect of earthquake could be seen in Sumatera with 9.2 on the Richter scale, which caused a tsunami wave and resulted in casualties and damage to infrastructure. This tsunami occurred on December 26, 2004. This massive tsunami killed over 167,000 people mainly in Aceh. All these disasters bring substantial damage, including death and destruction, and seriously jeopardize recovery of human and physical assets (Baez et al, 2010). The worst effect is that the poorest carry the heaviest burden of the effects of disasters, and this gives adverse effects on the health and physical development of children. In addition, a large number

[11] Asian Countries Top Child Labour List. Retrieved May 15, 2014 from http://aseantuc.org/2011/10/asian-countries-top-child-labour-list/

[12] An area with a lot of tectonic activity.

[13] Natural Disasters in Indonesia. Retrieved February 13, 2014 from http://www.indonesia-investments.com/doing-business/risks/natural-disasters/item243

of children in areas affected by natural disasters are exposed to entering child labour[14]. To eradicate the problem, the government of Indonesia has made provisions regarding child labour. Children under the age of 13 years are prohibited to be employed under Chapter X Articles 68 to 75 of the Manpower Law[15]. Children aged 13 to 14 years are permitted to do light work as long as it does not interfere with their condition as a 'normal children'. Under Article 64 of the Human Rights Law and Article 13 and 59 of the Child Protection Law[16], it is stated that every child is authorized to be protected from economic exploitation that can be harmful to them. The government of Indonesia also gained support from the International Labour Organisations (ILO) to start the International Programme on the Elimination of Child Labour (IPEC). Approximately 67 action programmes and 26 mini programmes[17] are conducted to ensure child labour activities are in line with national policy. To implement the programme, the IPEC also has cooperated with the Department of Manpower, Department of Education, Department of Social Welfare and Non-Governmental Organisations (NGO), the Labour Organisation, Entrepreneur Organisations and various universities in Indonesia[18]. However, child labour is still prevalent in Indonesia, which is observable and hence deniable. This is unacceptable because children in Indonesia are well protected by a number of laws and regulations. This thesis examines the determinants of children involved in economic activity, the trade-off between work and school and the household's non-leisure (work, school and both) time allocation for children, which represents the child's status over time. In addition, there are differences in children's time allocation by sex, suggesting that gender considerations play an important role in

[14] Child Labour in Asia and the Pacific. Retrieved August 2, 2014 from http://ilo.org/ipec/Regionsandcountries/Asia/lang--en/index.htm
[15] Pan Mohamad Faiz (2006). 'Child Labour in Indonesia'. Retrieved January 27, 2014 from http://faizlawjournal.blogspot.co.uk/2006/12/child-labour-in-indonesia.html
[16] *Ibid.*
[17] *Ibid.*
[18] *Ibid.*

the assignment of children's work responsibilities, which may be explained by the existence of son preference. Thus, this thesis is useful at least to fill this basic information gap.

1.4 Research Objectives

Poverty plays a major role in the vulnerability of children to child labour (Siddiqi and Patrinos, 1995; Angemi, 2008). However, other factors such as parent's perception of the importance of education, tradition and culture play a role as well (Siddiqi and Patrinos, 1995). This will influence parents to decide whether a child is sent to school or into labour. Therefore, the aim of this study is to examine the determinants of child labour in the Indonesia context. This thesis focuses on the changing trends in the employment of children over a period of two years; 2005 and 2007. Thus, it is critical to seek answers to questions such as: Is child labour related to socio-cultural factors? Or, does it result from income of the family? Furthermore, this dissertation also attempts to investigate the sex preference and gender differentials in child labour. More specifically, the objectives of this research are:

- To have a clear picture and better understanding of the incidence of child labour in Indonesia and the trends in 2005 and 2007 (which is 8-9 years after the financial crisis in 1997/1998 and after 1-2 years of the tsunami in 2004).
- To study the role of heads of household and spouses, along with other characteristics on the decision-making process in the household on the child's employment.
- To examine the existence of Luxury Axiom proposed by Basu and Van (1998), where children will be sent to work if family income drops very low.

- To study the effects of household land ownership on the decision of whether children will go to work or to school.
- To study the effects of basic services on the children's non-leisure time allocation; school only, work and school, work only, neither work nor school.
- To investigate the sex preferences among married women, reflected by gender differentials in child labour.
- To investigate the differences in and determinant of time spent on non-leisure activity by gender.

The findings of this research will help policy makers to reflect on the existing policies and eventually design programs and plan resource allocation to address child labour in Indonesia.

1.5 Thesis Structure

This thesis consists of seven chapters. This chapter provide a historical international context of the study and introduces the key concepts in child labour. This chapter also sets the research questions investigated in this thesis. Chapter 2 presents the literature review that outlines the factors that contribute to child labour including child characteristics, household characteristics, trade and globalization, migration, imperfect markets, credit constraints, and wealth. The chapter reviews the findings of previous studies on trade-off between work and schooling. Literature focusing on the implications of child labour on educational attainment and health is also provided in Chapter 2. The chapter also outlines an empirical overview of policies that have been designed on eradicating child labour internationally and in Indonesia.

Chapter 3 estimates the determinants of child labour (defined as working in the previous week) using a probit model that includes child characteristics, household and community. The data are drawn from the Indonesia National Socioeconomic Survey (SUSENAS) of 2005 and 2007, consisting of children aged 10-17 years. The cut-off age for the estimate is 10-17 years because the information on employment is only given for children aged 10 years and above. A number of key determinants are identified including most of the child labour that are located in rural areas. In terms of region, child labourers mostly reside in the Java Islands, which consist of these provinces: East Java, West Java, Banten, Central Java, Jakarta and Yogyakarta. In addition to child characteristics, the chapter also analyses household head characteristics, since the head of the household plays the main role in household decision-making (Brown, 1994). Thus, the head of households' level of education and their type of employment are included in the estimates. Apart from that, household characteristics such as birth order and number of children are also included. To investigate the effects across the region, dummies for 33 provinces in Indonesia are counted in the analysis. In addition, the chapter also tests the existence of Luxury Axiom proposed by Basu and Van (1998).

Since children in our sample are still of school-going age, Chapter 4 extends the analysis by examining attending school as the other activity in addition to working. The sample consists of children aged 15-17 years from the SUSENAS 2005 and 2007 datasets. There is evidence concerning the trade-off between work and school (Patrinos and Psacharopoulos, 1997; Akabayashi and Psacharopoulos, 1999; Ridao-Cano, 2001; Rosati and Rossi, 2002; Edmonds, 2003, Kambhampati and Rajan, 2008). Some studies found that working is negatively associated with schooling, and other studies claimed that working and schooling are compatible. To investigate the relationship, a bivariate probit was used to model the probability of children working and/or going to school.

Both dependent variables are the dichotomous variables "work" and "school". The determinants explored include characteristics of head of households and those of the spouse's characteristics. This is done to investigate the role of spouse in the household decision-making alongside the head of the household. Wahba (2005) found that education of the household's head and spouse is important on the decision between working or schooling (see also Tharmmapornphilas, 2006; Ndjanyou and Djienouassi, 2010). In addition, sibling age composition matters on the probability of work and school (Canagarajah and Nielsen, 1999; Togunde and Richardson, 2006; Dammert, 2010). Furthermore, land ownership that is measured in size (hectare) was included in the estimates to investigate the wealth effect, since literature suggests that land ownership has a significant effect on working and schooling (Deb and Rosati, 2002; Bhalotra and Heady, 2003; Basu and Tzannatos, 2003; Basu et al, 2007; Bhalotra, 2007).

Households allocate time for different activities among their members, including children. Therefore, children's activities depend heavily on factors that affect household's constraints, opportunities and incentives. The decision of whether children will go to school or not depends on the extent to which households require their labour to achieve some level of welfare. However, children may also combine work and school to earn income, which enables children to continue their schooling (Thorsen, 2012). Interventions such as banned employment of children below the age of 14 years can lead to limited choices available for the child. Thus, the child can neither work nor go to school. Chapter 5 investigates the supply side factors that motivate households to allocate non-leisure time of their children using multinomial logit models. Multinomial logit allows the analysis of decisions across more than two categories, and also enables the determination of choice probabilities for different categories of child exploitation.

This portrays the child labour decision as a simultaneous decision-making process. Furthermore, apart from the well-known drawbacks of the Independence of Irrelevant Alternatives (IIA), this approach is more appropriate than the probit or logit models (Nkamleu, 2009) and have been implemented in several studies of child labour (Deb and Rosati, 2002; Khan, 2003; Khanam, 2004; Ranjan, 2004; Bonsang and Faye, 2005; Jeong, 2005; Khanam and Rahman, 2005; Rickey, 2009; Okurut and Yinusa, 2009; Moyi, 2011). The datasets are drawn from SUSENAS in the years of 2005 and 2007. Apart from the explanatory variables introduced in Chapter 3 and Chapter 4, basic services are added to the analysis since the presence of such services in household decreases the cost of schooling as children are freed from the responsibility of fetching water and collecting wood. These include the proportion of households who owned the dwelling, the proportion of households with improved drinking water, the proportion of households with improved sanitation and the proportion of households having a source of electricity. In addition, the number of schools in each province, student-teacher ratios and gross regional domestic product are also included in the estimates. There are several common themes explained in Chapter 3 to Chapter 5, which are estimates separated by gender and region, and also for each group of age 5-14 years and 15-17 years in an attempt to achieve some additional understanding about the time allocation decision among children by gender, among children in urban and rural areas, as well as among younger and older children.

The gender gap in terms of labour and schooling may reflect the existence of gender preferences in a family. Gender preferences for children are developed not only from the personal desires of parents, but also from the cultural and religious traditions and community norms that shape individual's attitudes and behaviour. Therefore, based on the desire of women for future birth, Chapter 6 investigates the prevalence of sex

preference among ever-married women aged 15-49 years using Multiple Classification Analysis (MCA). The data used was drawn from Indonesia Family Life Survey 4 (IFLS4), which was conducted in 2007. Economic considerations usually favour sons because sons may be valued for their help on the family farm or their ability to earn wages (Arnold, 1997). The first analysis measures son preference by including a dummy variable of having at least one son in a family. Age at marriage and women's education are also included since these two variables are related to fertility. Particularly, for higher age at marriage, low fertility is generally observed (Dommaraju, 2008), and better educated women are associated with lower fertility (Akmam, 2002). In addition, women's age, number of living children and number of deceased children are included as covariates. Next, gender differentials in children's time allocation is analysed using tobit models with hours of work as the dependent variable. Children's time allocation includes hours spent on schooling, housework and market work. The main hypothesis is that male children have more leisure time than female children. Apart from that, other variables are also included in order to examine the determinants of the hours located on non-leisure activity. Decomposition analysis was used to explore the difference in the determinants of non-leisure hours spent between male and female children.

Finally, Chapter 7 summarizes the main findings of this thesis and draws out their critical reflections on the current situation of child labour in Indonesia. The chapter also provides recommendations for further research and suggests policies for further actions.

CHAPTER 2: EMPIRICAL OVERVIEW

2.1 Child Labour: Introduction

It is contended that, from a normative perspective, child labour occurs due to weak agency and distributive inequality (Satz, 2003). The former aspect refers to the lack of cognitive, moral and affective capacities of adults. In particular, it occurs due to the surrogate decision-making, ignorance and uncertainty of the future cost and benefits of educating the children. The latter aspect occurs between societies or between families within a society. Nieuwenhuys (1996) study on the paradox of child labour and anthropology argues that poor children, who are not employed, perform crucial work in the domestic arena. Moreover, low valuation of children's work causes children's vulnerability in the labour market and hence their exclusion from wage employment.

According to the Article 32.1 of Convention on the Rights of the Child, child labour is referred to the work performed by children in the age of 5-17 years that is likely to interfere with their education, or to be harmful to their health or physical, mental, spiritual, moral or social development. International Labour Organisation defines child labour as the working of children who are below the minimum legal working age and their work is hazardous. In other words, Convention 138 specifies child labour as labour performed by children who are under a certain age engaged in hazardous work that is thus likely to impede children's education and their full growth. The work includes the majority of labour activities undertaken by children under the age of 18, whether it is paid or unpaid, for a few hours or full-time, whether they are working for their family or for others, casual or regular, and whether legal or illegal. However, the work excludes

chores undertaken by children at home. Instead of assuming the fact that all child labour are harmful to children, Edmonds and Pavcnik (2005) define child labour as comprising all aspects of child work, and argue that the effects of that work should be further studied. Priyambada et al. (2005) defined child labourers as children who regularly participate in the labour market, either to earn income for themselves or to supplement household incomes. In addition, since performing household chores are not strictly intended to generate income, this kind of activity is not considered to be child labour.

From a macroeconomic perspective, Nielsen and Dubey (2002) study on child labour was based on the recent macroeconomic literature on the substitution effect hypothesis, subsistence effect hypothesis, capital markets hypothesis, and the parental education hypothesis. For the substitution effect hypothesis, upsurges in child-adult wage ratio will increase the probability of non-enrolment in school, which can be estimated by computing the marginal effects and elasticity. The subsistence effect hypothesis is measured by monthly per capita expenditure, which is significantly negative on the probability of non-school activities. In terms of the capital markets hypothesis, land holdings tend to decrease the probability of work and other activities as well as increase the probability of working at home and non-enrolment. Human capital is produced with the input of parental human capital and time spent in school. Therefore, this hypothesis is denoted as the parental education hypothesis. In particular, this hypothesis analyses whether the activities of children in a household are affected by the education of the household head.

Axioms

An empirical testable hypothesis of Basu and Van (1998) model is that child labour arises if adult household income falls below some benchmark level. Ray (2000) tests the

hypothesis of luxury axiom on child labour, and child schooling among Peruvian and Pakistani children. Parental altruism, which mentions that only poor parents send their children to work, is weakly supported in Peruvian data. However, the axiom is rejected in Pakistan. Ray finds that income and related considerations do not have much effect on children's work input. However, the increased provision of public services[1], leading to improved 'quality' of life and increased education of adult females, leads to a significant reduction in child labour. The interaction between adult males and child labour is qualitatively different between adult females and child labour. The study shows little support for the substitution axiom in relation to adult male labour. Participation of children in the labour market tends to increase once the adult female wages rise. He concludes that adult males and children are substitutes in Peru, while adult females and child labour are complements in Pakistan.

Tharmmapornphilas (2006) tests the luxury axiom among children in Thailand, who are between the ages of 15 and 17 years. However, this study finds no empirical evidence confirming the luxury axiom after controlling the effects of parental schooling. He concludes that well-educated parents tend to earn more income and the influence of poverty has been absorbed into the parental education. However, the regression equations might have endogeneity problems, since the dependent variable, which is the child's working hours, has some influence on the explanatory variable (household income).

In light of the luxury axiom and the substitution axiom, Fan (2011) presents a fundamental framework in explaining the wealth paradox. He develops a simple model including the four crucial components: child leisure, child labour, education and a

[1] With the presence of electricity and water supply improvement, which gains in reducing child employment and increasing child schooling.

household's subsistence constraints. He assumes[2] each family consists of one parent and one child, and the parent is the one who make decisions in the household. The parent's utility function is given as:

$$V \equiv \ln(c) + \delta \ln(h) + \theta l \tag{2.1}$$

Where, c is household consumption, h is the child's human capital and l is the child's leisure. δ and θ are positive parameters to measure the extent in which parents are altruistic. The child's time is divided into three parts: time for work, e, time for study, s, and time for leisure, l, which sum up to one unit of time: $e + s + l = 1$. Fan assumed that a child's human capital production function is determined by the financial resources on their education, x, and their time of study, s, which take the Cobb-Douglas form: $h = x^{\alpha} s^{\beta}$, where, α and β are both positive coefficients. Therefore, Equation (2.1) can be re rewritten as:

$$V \equiv \ln(c) + \delta \ln(h) + \theta l = \ln(c) + \alpha\delta \ln(x) + \beta\delta \ln(s) + \theta l \tag{2.2}$$

In terms of demand of labour and determination of wage rates, it is assumed that individuals operate in a small open economy in a one-good world and that takes the production function of $Y = F(K, L) \equiv Lf(k)$, $k \equiv \frac{K}{L}$, where Y is the total output, K is the quantity of capital, and L is the quantity of labour. The interest rate of physical capital, r, is assumed to be constant[3], $\bar{r}$, and the wage rate[4], w, in the perfect competition economy is constant at the level of $f(\bar{k}) - \bar{k}f'(\bar{k})$.

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[2] Based on the existing literature of Basu and Van (1998) and Fan(2004a), Fan(2011) extents the framework by assuming that the parents care about their children's leisure and human capital (human capital formation depends on money input and parent's time input), and family's consumption as well.

[3] Since the small economy permits unrestricted international lending and borrowing, interest rate also equals to world interest rate that assumed to be constant, $\bar{r}$.

[4] The ratio between capital and skilled labour is constant at a level $f'^{-1}(\bar{r}) \equiv \bar{k}$.

Every adult is endowed with one unit of labour and every child is endowed with γ unit of labour $(\gamma \geq 0)$. Thus, adult's income is indicated as w, and child's income is indicated as γw. By assuming that parents cannot borrow in the capital market with the consideration of bequest from parents to children, adult's budget constraint is: $c + x = w + e\gamma$. Then, rearranging child's time equation into adult's budget constraint, gives: $c + x + \gamma ws + \gamma wl = w + \gamma w$. A household faces a subsistence constraint, which is described as: $c \geq \Phi$, where, Φ is the minimum level of consumption for the subsistence of the household members. In the case where the subsistence constraint is not binding, parent maximizes their utility subject to $c + x + \gamma ws + \gamma wl = w + \gamma w$, which is:

$$L = \ln(c) + \alpha\delta \ln(x) + \beta\delta \ln(s) + \theta l + \lambda(w + \gamma w - c - x - \gamma ws - \gamma wl) \quad (2.3)$$

Therefore, the first order conditions are:

$$\frac{\partial L}{\partial c} = \frac{1}{c} - \lambda = 0 \quad (2.4)$$

$$\frac{\partial L}{\partial x} = \frac{\alpha\delta}{x} - \lambda = 0 \quad (2.5)$$

$$\frac{\partial l}{\partial s} = \frac{\beta\delta}{s} - \lambda\gamma w = 0 \quad (2.6)$$

$$\frac{\partial L}{\partial l} = \theta - \lambda\gamma w \leq 0, \text{(with strict equality holding if } l > 0) \quad (2.7)$$

To solve a parent's optimization problem when the subsistence constraint is not binding, (2.7) holds with strict equality, and in this case, we get:

$$c = \frac{\gamma w}{\theta} \quad (2.8)$$

Considering that c^* is the optimal solution without subsistence constraints, then if the subsistence constraint is binding if and only if $c^* < \Phi$. Therefore, if $< \frac{\theta}{1+\alpha\theta+\beta\delta-\theta}$, from (2.8), the subsistence constraint is binding if and only if $c^* = \frac{\gamma w}{\theta} < \Phi$, namely $w < \frac{\theta}{\gamma}\Phi$. However, if $> \frac{\theta}{1+\alpha\theta+\beta\delta-\theta}$, where (2.7) holds with strict inequality, we get $l = 0$. Then, from (2.4), (2.5), (2.6) and the adult budget constraints, we get $c = \frac{w+\gamma w}{1+\alpha\delta+\beta\delta}$. The subsistence constraint is binding if and only if $c^* = \frac{w+\gamma w}{1+\alpha\delta+\beta\delta} < \Phi$, namely $w < \frac{1+\alpha\delta+\beta\delta}{1+\gamma}\Phi$. Therefore, the subsistence constraint is not binding if $w > \max\left(\frac{\theta}{\gamma}\Phi, \frac{1+\alpha\delta+\beta\delta}{1+\gamma}\Phi\right)$.

If the subsistence constraint is binding, then, $c = \Phi$, where the Langragian can be written as:

$$L = \ln(c) + \alpha\delta \ln(x) + \beta\delta \ln(s) + \theta l + \lambda(w + \gamma w - c - x - \gamma w s - \gamma w l)$$

With the first order conditions of:

$$\frac{\partial L}{\partial x} = \frac{\alpha\delta}{x} - \lambda = 0$$

$$\frac{\partial l}{\partial s} = \frac{\beta\delta}{s} - \lambda\gamma w = 0$$

$$\frac{\partial L}{\partial l} = \theta - \lambda\gamma w \leq 0, (\text{and strict equality holds if } l > 0)$$

Child labour decreases as parent's income increases if $\frac{de}{dw} < 0$. In case where subsistence constraint is not binding, when $w > \max\left(\frac{\theta}{\gamma}\Phi, \frac{1+\alpha\delta+\beta\delta}{1+\gamma}\Phi\right)$, child labour exists if and only if $\gamma > \frac{\min(\beta\delta,\theta)}{1+\alpha\delta}$, and children's working time is independent of their parents' income, so $\frac{de}{dw} = 0$. Hence, Fan (2011) concluded that the subsistence

constraints are not binding when the adult's wage rate is relatively high. Hence, the substitutability between child labour and adult labour become the major determinant of child labour compared to the low adult's wage rate (subsistence constraints is binding), where the luxury axiom strictly holds. This study also concluded that the luxury axiom holds if and only if the substitution axiom holds weakly.

2.2 Determinants of Child Labour

The existing literature finds that the causes of child labour are numerous. Our review of this literature is to present the main causes, which force most of the children to work. We shall firstly discuss the causes related to the child and household characteristics, before looking into the policy intervention that have been implemented in a certain country. The previous literature of child labour in Indonesia will also be revised in this section to give a clearer view of the incidence of child labour in Indonesia.

2.2.1 Child Characteristics

2.2.1.1 Age

According to Edmonds and Pavcnik (2005), labour force participation rates are high among children with the age of 10 to 14 years old in rural areas, where children are usually working around 16 hours per week. In different regions of the world, Fares and Raju (2007) found that from every five children of between 7 and 14 years, one is working. Latin American, Caribbean, Middle Eastern and North African countries have the lowest mean child economic activity rate, with about 1 out of 10 children working. In a study carried out by Lukman (2009), high numbers of child prostitutes were found

in Malaysia in the late 1970s, which involved almost 2,000 to 8,000 young women under the age of 21 years.

De Tray (1983) observed children's work patterns in peninsular Malaysia, while they lived with their parents. The findings showed that children's participation rates and working hours rose sharply with age. In particular, when children reached mid-to-late teens, the "desired"[5] weekly working hours rose by seven hours, or almost a full working day, per year of age.

2.2.1.2 Gender

Generally, boys are more likely to participate in the labour market than girls (Deb and Rosati, 2002; Fares and Raju, 2007; Hsin, 2007). Fares and Raju (2007) found that, approximately, 1 in 4 boys and 1 in 5 girls, on average, were economically active across 65 countries in different regions of the world. As studied by De Tray (1983), Malaysian girls performed traditional housekeeping activities more frequently and for longer hours compared to boys. Thus, under the broadest definition of productive hours[6], young Malaysian girls provided the greatest transfer[7] to parents during their early years at home.

According to Kruger and Berthelon (2007), once the work definition includes household chores, girls are more likely to work and less likely to attend school. They also found that harmful effects household domestic (the burden of household chores by girls, which

[5] Refers to children's time allocation whether in or outside the home as with adult market time allocation in terms of participation decisions, conditional hours decisions and to explore parent demand functions for child time.
[6] The paper measures children's productive activities as (1) labour force activities plus time spent producing goods for home consumption, and (2) the sum of all productive activities including housework and child care.
[7] Transfers are measured in hours.

harming their early human capital accumulation) work fall upon girls from lower socio-economic levels. In particular, approximately, 58% of Brazilian girls aged between 10 and 14 spent their time on household chores during the previous week. On average, girls spent more time doing chores with 13.8 hours per week compared to boys with 8.9 hours per week. Therefore, the incidence of work increases from 13 percent for all children with the market definition to slightly more than 63 percent with a new definition that include housework. Once household work is considered, girls are less likely to specialise in just school and more likely to go to school and work concurrently. Moreover, domestic activities have a negative impact on girls' education, which is concentrated on girls from middle income families. As a result, they conclude that even a small amount of dedicated time to domestic chores may be enough to cause young Brazilian girls to drop out of school.

In Egypt, Assad et al. (1998) revealed that girls are more likely to delay school and begin working at an earlier age. In addition, despite the fact that work is strongly related to not attending school for both boys and girls, they found a strong causal relationship between work and lack of school attendance merely for girls. Besides, girls' education is more income elastic compared to boys. Kambhampati (2010) also revealed that the proportion of girls involved in both schooling and work in India had increased from 1 percent in 1993 to above 10 percent in 2004. However, the findings of Horrells and Humphries (1995) reveal that the reason for boys' involvement in the labour market is the fact that they have reached a certain age which allows them to work if opportunities were available, regardless of other factors including the family's circumstances. On the other hand, girls worked since household wanted them to work.

2.2.2 Household Characteristics

2.2.2.1 Fertility, Birth Order and Household Size

Adults or parents obtain utility from the consumption of material goods, plus the total number of children and number of educated children. Fan (2004) analysed the impact of child labour on the interaction between the quality and quantity of children. If both quality and quantity of children symmetrically enter into parents' utility functions, two possible outcomes may arise. Fan started the discussion with the utility obtained by an individual takes the following form:

$$V \equiv \ln(c) + \beta \ln(s) + \delta \ln(n) \tag{2.9}$$

Where, β and δ are positive coefficients, c denotes the consumption of material goods by adult, s denotes the number of educated children and n represents the total number of children. The cost of raising children is constant and is denoted by π. Each child's consumption, c^k is:

$$c^k = \pi + \alpha c \tag{2.10}$$

Where the extent of parent's altruism towards their children is measured by α, which is positive. Furthermore, the cost of education is fixed and indicated by b, where, $b \geq 0$. A child's cost of education includes both financial cost and the opportunity cost of working. Therefore, adult's and child's incomes are denoted by w and w_c, respectively. The household budget constraint can be written as:

$$c + n(\pi + \alpha c) + sb = w + (n - s)w_c \tag{2.11}$$

Where, n is treated as parameter[8], and for simplicity, the constraints, $s \leq n$, is assumed not binding. Thus, the first-order conditions give:

$$c = \frac{1}{(1+\beta)} \frac{(w + nw_c - n\pi)}{(1+n\alpha)} \tag{2.12}$$

And,

$$s = \frac{\beta}{(1+\beta)} \frac{(w + nw_c - n\pi)}{(\beta + w_c)} \tag{2.13}$$

By inserting Equations (2.12) and (2.13) into Equation (2.1), we get the first-order condition as below:

$$\frac{dV}{dn} = \frac{(1+\beta)(w_c - \pi)}{w + n(w_c - \pi)} - \frac{\alpha}{1+n\alpha} + \frac{\delta}{n} = 0 \tag{2.14}$$

The average level of children's human capital is described by $h \equiv \frac{s}{n}$. By totally differentiating Equation (2.14) with respect to n and w and rearranging, we get:

$$\frac{dn}{dw} = \frac{(1+\beta)(w_c - \pi)}{[w + (w_c - \pi)]^2 V''} \tag{2.15}$$

When n is at its optimal solution, the second-order condition, V'' must be negative. Hence, if $w_c > \pi$ so that$w_c - \pi > 0$, then $\frac{dn}{dw} < 0$. Therefore, when child labour is considered, fertility and income are negatively related, meaning that fertility will decrease when parents' income increases, if $w_c > \pi$. Additionally, as parent's income

[8] Fan (2004) analyse the optimization problem by assuming that adult makes decisions in two stages. An adult (she) chooses the number of her offspring in the first stage. In the second stage, she makes decisions on her children's education and household consumption, when the children have the capacity of studying and working.

increases, a higher proportion children will receive an education, $\frac{dh}{dw} > 0$ iff $w_c - \pi >$ 0. From Equation (2.13) :

$$\frac{ds}{dw} = \frac{\partial s}{\partial w} + \frac{\partial s}{\partial n}\frac{dn}{dw} = \frac{\beta}{(1+\beta)(b+w_c)} + \frac{\beta}{(1+\beta)}\frac{(w_c-\pi)}{(b+w_c)}\frac{dn}{dw} \tag{2.16}$$

Thus, when $w_c > 0$ so that $\frac{dn}{dw} < 0$, noting Equations (2.16) and (2.13), give:

$$\frac{dh}{dw} = \frac{n\frac{ds}{dw} - s\frac{dn}{dw}}{n^2} = \frac{1}{n^2}\left[\frac{\beta n}{(1+\beta)(b+w_c)} - \frac{\beta}{(1+\beta)}\frac{w}{b+w_c}\frac{dn}{dw}\right] > 0 \tag{2.17}$$

This shows that if there is no child labour, then $\frac{dn}{dw} > 0$ and the sign of $\frac{dh}{dw}$ is ambiguous, which $w_c = 0(< \pi)$. Fan concluded that without child labour, fertility may be a normal good and may be increased with parental income. However, with the incidence of child labour, fertility may fall and children may be better educated when parental income increases. In addition, the relative wage of child labour and parental income is essential in determining if parents will send their children to work or not. Therefore, fertility is likely to rise as the child's wage increases.

Hazan and Berdugo (2002) explored the process of development, in terms of child labour, fertility and economic growth. In the early stages, child labour is high with fertility rising and per capita output falling. Progress in technology tends to enlarge wage differential between parents and children. Since parents control their children's time and allocate it between child labour and human capital formation, in addition to the fact that child rearing is time incentive, a high wage differential tends to decrease the cost of schooling and increase the cost of rearing children. On the other hand, fertility and child labour decline when the wage differential is low and child education

increases. Eventually, the economy will converge to a sustained steady-state equilibrium, when child labour is eliminated and fertility is low.

Emerson and Souza (2003) found that a male last-born is less likely to work because older children can command higher wages. First-born female children tend to be less likely to attend school and work. However, they are kept out of school to assist their mother with housework and childcare. They concluded that fundamental differences in the effect of birth order on children's outcomes may exist especially in poorer households.

Household size also plays an important role in influencing children going out to work. As shown in the study carried out by Patrinos and Psacharopoulos (1997), family size has positive effects, where more siblings, or having a greater number of younger siblings, will increase the probability of age grade distortion (see also Grootaert and Kanbur, 1995; Horrell and Humphries, 1995). In addition, close birth pacing increases the probability of dropping out of high school and decreases the probability of attending tertiary level schooling. Consequently, their participation in the labour market tends to increase.

2.2.2.2 Parent's Education

According to Kambhampati and Rajan (2008), fathers' and mothers' education have a significant impact on the probability of children working (see also Emerson and Souza, 2003; Ersado, 2005). In particular, they found that fathers with a secondary or tertiary education are less likely to have their children working. In addition, secondary education of mothers seems also to have a significant negative impact on the probability

of their children going out to work. However, the tertiary education of mothers does not seem to influence the children to work.

Duryea and Arends-Kuenning (2003) analyse the outcomes of time allocation decisions of the children in urban regions of Brazil. This study represents a vector of demographic characteristics for the child and his family, including education of the household head, household income and market conditions and found that increasing the schooling duration of the household head by two years has a much larger effect on schooling and employment outcomes, compared to change in wages or family income in terms of gender and the trade-off between the two activities.

2.2.2.3 Parent's Employment

According to Horrell and Humphries (1995), in study of the effect of industrialization on working children, boys are more likely to work in comparison with girls if their father worked in a mining and agricultural sector. In addition, they are less likely to work than girls if their father worked in a factory. However, boys and girls are as well likely to work if their father was an outworker.

In India, Kambhampati and Rajan (2008) found that mother's employment has a complicated effect on children's activities, especially for girls, but father's employment seems to decrease the probability of child working. In particular, when mothers are employed outside the home, girls are more likely to do household chores. In other words, girls become a substitute for their mothers at home. However, girls' labour is complementary to mothers' labour when their mothers are employed within the home, in family enterprises.

2.2.3 Income

In urban region of Turkey, Dayioglu (2006) employed household production model to analyse the impact of household income on child labour. The analysis found that a 1 percent increase in household income led to a decline in the probability of child employment of 1.2 percentage points. In other words, an increase in adult wages reduces the incidence of child labour. However, the decline in child labour and increase in school enrolment does not imply that an increase in wages necessarily reduces child labour. In rural India, the kinship system which is prevalent in different regions amongst different religions and castes is found to be significant in determining the options for girls: working, schooling or doing housework. Kambhampati and Rajan (2008) find that girls living in villages with high average male wages tend to have a lower probability of working since the main motivation for child work is survival. On the other hand, the probability of working increases with the high average female wages, since mothers and daughters' employment are complementary to each other.

Wahba (2005) found that market wage of illiterate adults in Egypt has a strong negative effect on the probability of child work, but has a smaller absolute effect on the probability of school participation. In particular, with an increase of 10 percent in the illiterate male market wage, the probability of child labour declines by 21.5 percent for boys and 13.1 percent for girls. The higher the share of adults employed in manufacturing and public sector jobs in the local labour market, the lower the likelihood of child labour.

In addition, a possible reason for poor parents who allow their children to do part-time work while schooling is that they are behaving rationally to gain the benefit of both activities. As a study by Ilahi (2000), a Brazilian child worker's income represents 17

percent of an urban household income and 22 percent of a rural household income. Therefore, it is likely that these incomes help poor households especially in rural areas to send school-age children to school.

By focusing particularly on the links between child labour and the labour market, Grimsrud (2003) found that changes in the adults' labour market participation would affect children in the household. If the primary breadwinner had difficulty finding work, a low-income household would send other members to seek work. They may pull out their children from school because households cannot insure themselves adequately against income fluctuations. Rationally, changes in the adult wage might change children's participation rates in the labour market.

Applying poverty as a key factor that influences children to work, Amin et al. (2004) used the natural log of non-child family income as an independent variable, since the negative influence of higher income on a child's likelihood of working would diminish as an income increases. Their results supported the notion that a family's poverty affects the probability that a child will work. Therefore, keeping children away from work is a luxury that poor families cannot afford. For older urban and rural boys, being in the lowest income quintile increases the probability of working by almost 0.26 percent and 0.12 percent, respectively. Furthermore, for older urban and rural girls, living in poverty leads them go to work by almost 0.11 percent and 0.23 percent, respectively. The results are stronger than those younger boys and girls in both areas, since the older the child, the greater the probability that he/she will work.

2.2.4 Wealth

According to Basu et al. (2007), larger land holdings lead to higher child labour. Random samples of 25 households were chosen in each village in the mid-Himalayan regions of Himachal Pradesh and Uttaranchal, India, to investigate the general relationship between child labour and land holdings. Since domestic work is the largest component of child labour in the region, their study included an all-inclusive work definition, if it was for wages or not. The study revealed the existence of an inverted-U relationship between child labour and land holdings (see Basu and Tzannatos, 2003). In particular, the study found that child labour increased with land, way past the average value of land-holding. Furthermore, it declined well before the observed maximum land-holding. As concluded by Deb and Rosati (2002), the incidence of child work were higher among households that were asset poor, as opposed to being income poor.

The wealth paradox for child farm labour, proposed by Bhalotra and Heady (2003), indicated that children from landowner households have a higher tendency to work, in comparison to children from landless households. They claimed this paradox was due to failures of the markets for labour and land, which, in turn, was aggravated by an imperfect credit market. They also found that the wealth paradox persists for girls, for the reason that girls are less of a perfect substitute for hired workers, as opposed to boys. In a separate study, Grootaert and Patrinos (2002) and Dayioglu and Assad (2002) found that child labour is more common in households with family enterprises. Another study in Pakistan revealed that children (girls), in households that own relatively large plots of land, were more likely to work rather than attend schools. This is opposed to those girls in households with smaller land properties (Bhalotra, 2007).

2.2.5 Imperfect Markets and Credit Constraints

Baland and Robinson (2000) build a model of child labour and examine the trade-off between child labour and accumulation of human capital. By using the model of one-sided altruism and exogenous fertility, they found that child labour is efficient when marginal return to education is equal to its opportunity cost, with no bequest and an imperfect capital market. In the study by Udry (2003), poor parents who plan to leave no bequest for their children usually utilize child labour to support the current consumption of the household. With the assumption that a parent in a poor family (poor relative to future generations) plans to leave no bequest (reduced to zero), child labour is the only instrument available to transfer resources from the next generation to support current welfare.

By implementing the model of Baland and Robinson (2000), Rogers and Swinnerton (2003) identify a surprising property of their model - when parents and children care about each other's utility, some households with higher incomes will send their children to school for fewer hours and work for more hours than households with lower incomes. Upsurges in schooling and reductions in child labour are not always led by the increases in parental income. The model assumed that every family has one parent and one child. Each child is a member of household in the first period with every parents work and supplies one unit of labour, in efficiency units, of A. Children could also work[9] in the first period, and the time they spend at work is valued as 1.

[9] Their income is controlled by their parents (first period) until they become adult (second period). One unit of labour they supply has a value in efficiency units that depends on the amount of schooling they received during the first period. The return to education is given by $h(e)$, where $h(0) = 1$, $h'(e) > 0$, and $h''(e) < 0$.

In the first period[10], only parents make decisions on the amount of consuming and saving, hence $c_p^1 + s = A + 1 - e$. In second period[11] decisions are made both by the parent and child on how much to consume and how much to transfer to the parent, given by $c_p^2 + b = s + \tau$ and $c_c + \tau = h(e) + b$. The parent has a utility function[12] of $W_p = u(c_p^1) + u(c_p^2) + \delta W_c$ and child's preferences are $W_c = \lambda W_p + u(c_c)$. Straightforward substitutions allows the parent to choose how much to save (s), size of bequest (b), and time which they will spend for their child at school (e), assuming that the child will adjust how much to transfer to her parent (τ) in response to the choices. Conditional on the choices made by the parent, the child chooses the size of transfer they will give to their parent. Therefore, the optimal transfer is obtained from the child's first order condition:

$$\lambda u'(c_p^2) - u'(c_c) \leq 0 \quad (if\ s, b\ and\ e < 0, then\ \tau = 0) \tag{2.18}$$

Rogers and Swinnerton (2003) assume that some education is always chosen ($e > 0$) for the return function for education. Thus, the set of parent's first-order condition is given by:

$$-u'(c_p^1) + u'(c_p^2) + [u'(c_2^p) - \delta u'(c_c)]\frac{\partial \tau}{\partial s} \leq 0 \quad (if\ "<",\ then\ s = 0) \tag{2.19}$$

$$-u'(c_p^1) + \delta u'(c_c)h'(e) + [u'(c_p^2 - \delta u'(c_c)]\frac{\partial \tau}{\partial e} = 0 \quad (for\ e) \tag{2.20}$$

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[10] Each parent receives income A for her own labour and income $(1 - e)$ for their child's labour. How much time a child will spend at school (e) and at work $(1 - e)$, total income $(A + (1 - e))$ to consume (c_p^1) and to save (s) is decided by the parents.

[11] How much to consume (c_p^2) and the size bequest (b) to leave to the child is decided by the parents, while, the child in the second period decides how much to consume (c_c) and how much to transfer to their parent (τ).

[12] The parent and the child are altruistic to each other, implies $1 > \delta > 0$ and $1 > \lambda > 0$, respectively. $u(c)$ is a twice-continuously-differentiable function with $u'(c) > 0$ and $u''(c) < 0$.

$$-u'(c_p^2) + \delta u'(c_c) + [u'(c_p^2) - \delta u'(c_c)]\frac{\partial \tau}{\partial b} \leq 0 \ \ (if \text{ "<", } then\ b = 0) \qquad (2.21)$$

An equilibrium is any 4-tuple, $\{\hat{s}, \hat{e}, \hat{b}, \hat{t}\}$, that satisfies the parent's and the child's first order conditions which yields the highest possible utility to each action taken by the other. The equilibrium education ($\hat{e}$) and child labour ($1 - \hat{e}$) vary with parental income, which suggests that older children to make transfers when they earned high income relative to their parents. However, if the condition is sufficient for transfer and the parent is not saving-constrained, increase in parental income may decrease the size of transfer. Hence, increases in parental income will bring forth less child labour and more child schooling. There is an important role for liquidity constraints in the decisions of child time allocation. Edmonds (2005) tested whether schooling and child labour supply decisions are in accordance with the predictions of an unconstrained human capital investment model. He examines the responses of schooling and child labour to the timing of income, through comparing child activities in households which are eligible for the Old-Age Pension (OAP), to households that are nearly eligible. The study found that anticipated large cash transfers to the elderly in South Africa appear to be associated with increases in schooling and declines in hours worked. In addition, the results were also consistent with the liquidity constraints provided by Baland and Robinson (2000), where an inability to borrow against future income forces households to under-invest in education.

Bacolod and Rajan (2008) developed a model of household decision–making which highlights how liquidity constraints and differences in child endowment interact in order to determine parents' decisions on child labour. Each household consists of a parent and a child, and live for two periods. Each child is endowed with one unit of time which is divided into work, l, education, e, and idleness, i. Assume that in the first period the

income of the parent is Y, and child earns unskilled wage, w, per unit of time worked. The parent is assumed not to earn anything in the second period. The return from education depends on the ability of the child, σ. The income of the child in the second period is $f(\sigma, e)$ if a child with ability σ devotes a fraction e of their time to education, where $\frac{df}{d\sigma} > 0$ and $\frac{df}{de} > 0$. Direct cost of schooling proportional to the devoted time to schooling is denoted as $d.e$, and parents get a disutility from sending the child to work, which is given by $v(l)$, where $v' > 0$. The total consumption of the household in period 1 and period 2 is denoted as C_1 and C_2, respectively, and the saving in the first period is indicated as S. The utility function of the household is given as:

$$U(C_1, C_2, l) = u(C_1) - v(l) + u(C_2) \tag{2.22}$$

Bacolod and Rajan (2003) further assume that households can borrow and lend freely in the capital market at a given rate of interest, r. Hence, a household will face the following budget constraint:

$$C_1 = y + wl - ed - S; \quad C_2 = (1 + r)S + f(\sigma, e) \tag{2.23}$$

The time constraint on the child's activities is given by: $l + e + i = 1$ and they also assume that $f(\sigma, e) = w + \theta\sigma e$, where θ is capturing the returns from schooling, meaning that the earnings in the adult life are w if the child does not go to school. Thus, the return from schooling is proportional to the time spent on schooling and ability. Hence, the objective function that parents want to maximize is:

$$\underset{S,l,e}{Max} \log(y + wl - ed - S) - al + \log\big((1 + r)S + w + \theta\sigma e\big) \tag{2.24}$$

In the credit constraint case, the parent is assumed not to have access to the credit market for borrowing. The restriction of $a = 2(1 + r)$ was imposed to simplify the

analysis of the regression above the credit-constraints. Thus, following parent's maximization problem is subject to the constraint, $S \geq 0$:

$$\underset{S\geq 0, 0\leq l\leq 1, 0\leq e\leq 1}{Max} \log(y + wl - ed - S) - al + \log(w + \theta\sigma e + (1 + r)S) \qquad (2.25)$$

Which is subject to the aggregate time constraint, $l + e \leq 1$. The models predicts that in the poorest households, $\left(y < \frac{w}{a}\right)$, low ability's children, $\left(\sigma < \frac{ad}{\theta}\right)$, will be pulled out of school, where $e = 0, l > 0$, and $i > 0$. However, children of high ability, $\sigma > \frac{ad}{\theta}$ in the poorest households where children who have to work will be sent to school as well, where $e > 0$, $l > 0$, and $i \geq 0$. Poor households with high-ability children are more likely to send their children to school and households with moderate levels of income may let their low ability children remain idle, rather than send them to work. In particular, idleness begins to occur amongst middle-income households, that are $\frac{w}{a} < y < \frac{w}{a} + d$ for children who are with low ability, $\sigma < \frac{ad}{\theta}$. In addition, access to credit appears to have a higher negative effect on employment than its corresponding positive effect on schooling. In his study, Ersado (2005) measures the access of credit by the given data on household who had a loan and bank account in Nepal, Peru, and Zimbabwe. This study found that access to credit can reduce child labour and improves child education in both Nepal and Zimbabwe. However, in Peru, access to credit actually increases child employment and decreases schooling.

2.2.6 Bargaining Power

Reggio (2008) estimates the impact of a mother's bargaining power on a child's amount of work. Using the collective household model, he utilises the information provided in the Mexican Family Life Survey (MxFLS) data set on who makes the decisions in the

case of selling key assets, such as home, car and other appliances as a variables for bargaining power estimations. The results show that the participation rates in the labour force and hours of work among working children decrease with a mother's estimated bargaining power. The coefficient of bargaining power is always negative and is found to be significant only for girls, while boys do not seem to be affected by the distribution of power within the household.

Using the 2003/2004 Nepal Living Standards Survey (NLSS), Nyyssola (2007) investigates child activity in a household where the mother has a power in the intra-family decision-making process, compared to one where the father holds all the power. Using a set of bargaining power indicators, this study finds that the mother's non-labour income (remittances) decreases child labour more than father's remittances. In addition, findings also show a low maternal bargaining power in terms of a mother's labour hours, where children are more likely to work when the mother works. Moreover, mother's awareness of birth control has a positive effect for child schooling, while mother's marriage age was found to have a negative effect on child labour. The findings show that when mothers have more bargaining power in the family, children are sent to work less often.

2.2.7 Trade Liberalisation

In developing countries, trade liberalisation causes an increase in the relative price of exported goods and provides uncertain predictions considering its impact on child labour. Edmonds and Pavcnik (2002) examine those impacts through using the real price of rice to observe the relationship between price movement of primary exports in Vietnam (rice) and economic activities of Vietnamese children. In particular, this study

compares the changes in the children's economic activities due to the different changes in the relative price of rice over time. The results show that an increase of 30 percent in the relative price of rice leads to a 9 percent decline in child labour. In a different study, by using the price of rice, Edmonds and Pavcnik (2005) examine the overall relationship between rice prices and working children and discover the income effect of rice prices on working children through net production. They found that small increases in the price of rice were associated with decline in child labour. The largest decline was in households that were large net producers of rice. Moreover, the relationship between rice prices and child labour varies across households based on households' net products. In the case of net consumers, the increases in the price of rice led to increases in child labour, due to the households' credit constraints. As a result, they concluded that integration in the export sectors led to higher prices and these additional incomes for Vietnamese households tended to be related to a substantial reduction in child labour.

In terms of economic growth, Kambhampati and Rajan (2006) discuss the impact of economic growth on the demand and supply of child labour in India. The impact on the supply of working children is found to be linear and negative, while it is likely to be a quadratic (with a maximum) on the demand of working children. In other words, the initial impact of growth increases the demand of child labour, but sustained growth will decrease both demand (since they are no longer sufficiently skilled) and supply (household incomes improves) of child labour. They concluded that the growth actually increases child labour, due to the high demand of child workers. In particular, a 1 percent increase in growth increases the probability of working children by roughly 1 percent. Additionally, growth in industrial employment may reduce youth labour participation, but at the same time, having an adult female manufacturing worker in the household is correlated with higher responsibilities in the home for young females

(Federman and Levine, 2003). Consequently, industrialisation affects the opportunity costs of a child and an adolescent's time, through the increase in the demand for youth labour, plus a mother's demand for childcare and assistance in the household.

2.3 Trade-off between School and Work

According to Edmonds (2003), after a period of child labour, children may not return to school. Returning to not working may be relatively low because schooling may be unavailable or expensive, in terms of costs and travel time. A very low quality school has a strong relationship with low school attendance and consequently, a poor household's information on the return to their child's education may induce them to reduce education and keep their children at work, or both.

In Peru, working allows indigenous children to continue enrolling in school (Patrinos and Psacharopoulos, 1997). They believe that children can attend school and work, with apparently no negative effect on their school progress. In the case of children in India, Kambhampati and Rajan (2008) found that an observation on child labour over two years across the major states of India revealed that the pattern of schooling and child work has been changed. The participation rates among children across all activity[13] types, including schooling, had increased. However, a study by Ridao-Cano (2001) concluded that working though in school has a negative impact on the transition to secondary school. In particular, those children with a higher propensity to work are associated with lower school outcomes.

[13] Which is commonly in the agriculture sector.

Evidence from Pakistan and Nicaragua, as shown by Rosati and Rossi (2002), revealed that fewer working hours led to increases in school attendance. They argued that the changes in the probability of attending children to school will determine the effects of the variables on the hours worked (see also Triningsih and Ichihashi, 2010). The marginal effect is different among children who are attending school and/or work and this will have different impacts on policy, depending on if the children like to work or not. Besides, if a child starts to work one year earlier and does not go to school, the loss in his adult earnings is equivalent to having lost more than one extra year of schooling. In urban Brazil, Duryea and Arends-Kuenning (2003) demonstrated that employment rates of children are high, as local labour market opportunities improve; it means that it is more favourable for children to leave school and participate in the labour market. A study of Akabayashi and Psacharopoulos (1999) of Tanzanian children finds that there is a trade-off between hours of work and study. However, there is no evidence of variables that increase both working and studying significantly at the same time. Hours of work are significantly affected by community variables such as electricity supply and distance to water, however, less effect are found on the hours of study. In addition, the development of children's reading and mathematical skills are negatively correlated to the hours of work. This shows that working and human capital investment is not mutually exclusive.

Using crop and rainfall shocks as instrumental variables for child labour, Beegle et al. (2008) examined the consequences of child labour on education, employment choices and marital status over a 10-year horizon among children in Tanzania. Their findings showed a negative and significant effect of child labour on school years and on the probability of completing primary school 10 to 13 years later. In particular, one standard deviation increase in child labour hours is associated with a reduction in terms of half a

year of schooling, plus an 8.8 percentage point reduction in the chance of completing primary school. Therefore, individuals who worked when they were young are significantly more likely to be farming in adulthood In Paraguay, Patrinos and Psacharopolous (1995) analyse the factors that contributes to the increase in child labour which also reduced school attendance and increase the chance of grade repetition. By controlling the children's age, gender and language usually spoken at home, the empirical result shows that child work is a significant predictor of age-grade distortion. Heady (2003) analyses the effect of children's work on learning achievement by using measures of reading and mathematics ability. He finds a negative relationship between child labour and learning achievement. In addition, they also find that work had relatively little impact on school attendance. Evidence from Bangladesh also reveals a negative relationship between work and child's school enrolment (Khanam and Ross, 2005). In particular, working children are 88 percentage points less likely to be enrolled in school relative to non-working children. A gender-divide estimate reveals that working girls and boys are 75% and 88% less likely to be enrolled in school. Another study of working children in Bangladesh by Islam et al. (2009) finds that the school attendance of working children are strongly depended on the hours worked. Their logistic regression results show the highly significant and negative influence of hours worked on school attendance of working children. Children who work 5-9 hours per day are 96% less likely to attend school and those who work more than 10 hours per day are about 99% less likely to attend school than children who work 5 hours per day. This condition is due to the fact that children who are spending more time at work have a very little time to go to school.

2.4 Implications of Child Labour

2.4.1 Educational Attainment

Watson (2008) use OLS regressions and instrumental variable estimates to evaluate the effect of child labour on the test scores of Vietnamese children aged 12 years. She uses Peabody Picture Vocabulary Test as a measure of their educational attainment and the total number of worked hours as a child labour variable. The worked hours includes the hours spent on caring for others, doing domestic chores, working for the family farm and working outside home. The result shows that child labour does not have a significant impact on the test score results. In addition, child labour has a highly statistically significant negative effect on the number of extra classes attended per week; however, the magnitude of the coefficient is small. She concluded that children who are involved in child labour may benefit from the work experience. Furthermore, children managed to develop useful skills and having a sense of responsibility when they work moderately. Thus, they will value their education more if they have to work to afford schooling costs. Another study of child labour in Vietnam, Mavrokonstantis (2011) examines the impact of working on mathematics test scores in 2009, in urban and rural areas. There is evidence of negative relationship between worked hours and math scores. The urban-rural divide shows a different finding. The result reveals that child labour has no significant impact on educational attainment after instrumenting (using rice prices as an instrument for child labour), which may be due to the lack of strong instruments for rural children. In addition, he also suggests that working in rural areas are compatible with children's learning process, where they would have time to be spent on school-related activities. In contrast, there is a large adverse impact on educational attainment for children in urban areas. Particularly, an increase in worked hours reduces the test scores by 12.45 points. This condition is due to the type of work (formal labour

market) undertaken in urban areas which might be harmful for children and may not be compatible with schooling. Bezerra et al's (2009) study of Brazilian child labour, analyses the impact of child labour on school performance using OLS estimates after controlling for the endogeneity using instrumental variable (the average unskilled wage in the child's state of residence) techniques. They find that child labour contributes to a loss in students' school achievement. Working children that work for up to 2 hours per day shows no statistically significant effect on school performance. However, the additional hours does decrease their school performance. Specifically, children that work at home have a 5% lower score. Children that work inside and outside in the house have test scores which are lower by 7%.

There is also a problem of absenteeism of working children, which contributes to examination failure and increase in repetition rates (Dachi and Garrett, 2003). They note that waged employment is a major cause of children dropping out of school. Cavalieri (2002) also finds a negative impact of child labour on the probability of completing a school grade in Brazil. As found by Khanam and Ross (2005), working children in Bangladesh are 28% more likely to fall behind in grade attainment. The gender specific results reveal that working girls are 34% and working boys are 25% more likely to fall behind in schooling progress. In the long-run, child labour reduces educational attainment in adulthood (Krutikova, 2006). In particular, an extra hour of child labour per week decreases final educational attainment by 5%. With an average hours worked of 18 hours per week, working children have 90 percent less education than their counterparts who do not work. The results also reveal that child workers attain 7 years of education, while children who do not work were attain over 13 years of education. In Latin America, working children experience a reduction in educational attainment by

two years because of their early participation in the labour force. However, they contribute significantly to total household income (Psacharopoulos, 1997).

A study by Gunnarsson et al. (2006) on the linkage between child labour and school achievement in Latin America indicated that children who rarely work outperform those who often work but children who almost never work outperform those who work sometimes or often; both results are statistically significant. Additionally, child labour outside the home reduces achievements per year of schooling attended by 16 percent. Moreover, the impact of child labour on test scores of mathematics and language tests is negative and significant, whether child labour is treated as exogenous or endogenous. Dumas (2008) assessed the impact of labour performance during childhood on cognitive achievements of teenagers, which is measured by tests they have taken in Senegal, reveals that the effect of one additional year of working is significantly positive for three tests out of four[14], once controlling for education level. In particular, once controlling for community effects and instrument the score, child labour has negative impact on the life skills test and a positive impact on mathematics. This study concluded that children who have been involved in the labour market do not perform worse, but rather they perform slightly better than the others, due to an increase in resources that are allocated to schooling inputs.

2.4.2 Health

Children who are engaged in work are potentially exposed to a variety of hazards. O'Donnell et al. (2002) has noted the health consequences of child labour. The

[14] Life Skills and Easy Mathematics (oral tests); French and Advanced Mathematics (more advanced).

relationships between child labour and health can be either direct and indirect, positive and negative, static and dynamic, causal and spurious (Yadav and Sengupta, 2009). The negative effects threaten to damage to child's health, which hold longer-term consequences for health such as risks from contact with toxins, chemicals and pesticides. These health consequences will vary with the type of hazards in which the child is exposed. The physical damage greatly depends on the job type and the number of worked hours. As noted by Uddin et al. (2009), 60% of child labourers aged 14-16 years that are involved in a daily work of 14 hours will suffer from variety of short-term and long-term health problems in addition to the problem professionally unrecognized treatment for their health problems. Agriculture is by far the dominant sector of child employment and 1 in 8 children working there suffer illnesses or injuries because this sector has a very poor record of safety. In addition, in maximising welfare in a family, siblings might be expected to have lower nutritional status and greater morbidity since the existing resources are used to maintaining the health and nutritional status of productive members. Particularly, the lack of physical development from inadequate nutrition will affects child's abilities which might disrupt cognitive development and hinder academic performance (Leinberger-Jabari et al, 2005).

Despite the fact that children are exposed to health hazards, they help to generate resources which support to maintain themselves and their families. In turn, this may raise family living standards and siblings health in the short run. A study of Kassouf et al. (2001) on Brazilian child workers, examines the effect of early entrance into the job market on adult health. Their study finds that early entrance to the labour market is strongly associated with the low levels of both education and income. Their result also reveals that those living in rural area, especially male and non-whites, are more likely to start work early. In addition, as child started working in younger ages, the greater the

probability of reporting a poor health as an adult. Uddin et al. (2009) also notes that an early involvement in the labour market will impedes the children's physical growth, including their intellectual and psychological development, which contributes to negative impacts on their long-term health and earning potential. The study of the effects of child labour on child's health in Bangladesh conducted by Ahmed and Ray (2012) finds that younger children are more likely to suffer from backaches, infections, burns and lung diseases, while tiredness and exhaustion was experienced by older children. Their results are based on children aged 5-17 years who work as paid employees (including paid in cash or in kind), who are self-employed and who work as unpaid employees (work on the family farm).

2.5 Policy Intervention

Fasih (2007) analysed the impact of Employment of Children Act 1991 (EoCA) implementation on child labour. According to this legislation, which was enacted in April 1991, no children below the age of 14 shall be employed in any factory, mine, or any hazardous type of work. She modelled three difference-in-difference[15] estimations to estimate the effects during pre-intervention and post-intervention of the legislation on the employment of children who would have been affected by the Act with that of similar group who were not affected by the Act. The results of the analysis on children aged 10 to 13 and children aged 14 to 17 showed that children in both age groups are less likely to work; the magnitude of marginal effects are higher among 10 to 13 year

[15] Difference-in-difference estimation is a quasi-experimental technique that measures the effect some sort of treatment (in this study the treatment is Employment of Children Act) by simply looking at the treatment group (children, by age) before (pre-intervention of law) and after (post-intervention of law) to try to deduce the effect of the treatment. To get an accurate estimation, the composition of two groups is assumed to be same over the course of the treatment. (http://en.wikipedia.org/wiki/Difference_in_differences).

old children. The results also revealed that 10 to 13 year old children are less likely to be involved in the labour market than 14 year old children. In response, the EoCA mostly affected the employment of boys, especially in the sectors proscribed in the act. Regard to the fact that ages 13 and 14 are close substitutes, the results illustrate the significant impact of the act, in terms of the lower probability of work for 14 year old boys. However, the employment of 13-year-old children decreased by 25 percent by implementing the legislation. She concluded that the impact of the EoCA decreased the quantity of boys, but had little impact on girls, since they are mostly involved in housework (which is not listed as hazardous work in the act).

Ravallion and Wodon (2000) studied the effects of targeted enrolment subsidy which is known as the Food-for-Education[16] (FFE) programme in Bangladesh, on children's labour force participation and school enrolments. FFE participants have a mean enrolment rate that is 0.15 higher than non-participants. Moreover, the FFE stipend also shows a significant negative effect on children's labour force participation and has a strong opposite effect on the probability of being at school. In particular, an extra 100 kilos of rice increases the probability of children going to school as well as reducing the incidence of child labour by 0.04 for boys and 0.02 for girls. Therefore, for boys who were chosen for the program, lower incidence of child labour account for about one quarter of the surge in school enrolment. For girls, it accounts for one eighth. They concluded that the programme has strong positive effects on school attendance through the provided incentives. However, the reduction only accounts for a small proportion of the increases in school enrolment.

[16] Food-for-Education (FFE) program was launched by The Government of Bangladesh in 1993 and provides a free monthly ration of rice or wheat to poor families if their children attend primary school. The aims of this programme are to increase primary school enrolment, promote attendance and reduce dropout rates, and enhance the quality of education.

Imposing a fine for employing children will cause an expected punishment cost to the firms, unless the child's wage is less than the imposed fine (Basu, 2005). If households send their children to work merely to reach subsistence consumption, they tend to send more children to work if adult wage is below the critical amount of consumption. In his separate study, Basu (2003) had mentioned that there are policy dilemmas for controlling child labour. The dilemma arises when the policy makers and academics propose a lot of policies for controlling the number of children working, but do not think of children's welfare. Policies should mostly relate to the poor, plus good policy depends critically on the understanding of what causes child labour. By imposing a fine on firms that employ children, it might reduce the number of child workers, but that will not always coincide with a rise in children's welfare.

According to Edmonds and Pavcnik (2005), to ensure children are going back to school instead of working, the quality of education should be improved, including improving school structure and reducing the cost of schooling. Canagarajah and Nielsen (2001) also suggested a compulsory schooling law in an effort to reduce child labour and raise educational attainment (see also Lleras-Muney, 2002). School costs, including transportation costs and general school expenses, need to be adjusted. This is in addition to improving school quality, ranging from its roofing to furniture, in order to attract children to attend school. An income subsidy might help the household in poverty by targeting the characteristics of a poor family based on the geographical region. Also, parents' and household heads' education should be considered as well, when designing a policy to abolish child labour (see also Nyyssola, 2007). Therefore, programmes, such

as *Bolsa Escola*[17] in Brazil, which enable families to send their children to school, might succeed if applied in other countries (Muniz, 2001).

Parker and Overby (2005) discuss the ILO Convention on preventing hazardous child labour. They define the meaning of hazardous work among children and outline the issue of a hygienic workplace. They suggest that countries are supposed to formulate national and international standards on designing policies relating to public health. Doepke and Zilibotti (2005) developed a positive theory on child labour regulation (CLR), which relates to fertility, education and adult population, through examining the multiple politico-economic steady-states. The model is represented by overlapping generations of agents, which differ in age and skills, and contribute to the existence of multiple steady-states with fixed and endogenous policies. They concluded that the cost of schooling must be sufficiently low and children's marginal activities must not be too high to ensure the success of CLR.

2.6 Child Labour : Indonesia

2.6.1 Introduction

The issue of child labour regained attention in Indonesia during the Asian economic crisis, which started in mid-1997 (Priyambada et al, 2005). The proportion of children aged ten to fourteen years, who worked at that time, increased slightly from around 7 percent in 1997 to around 8 percent in 1998. However, the rates fell back to around 7 percent by 1999. In the past decade, most of working children have been between the age of ten and fourteen years old. However, the number of working children has

[17] This began in 1996, in partnership with UNICEF. This program pays families to send their children to school, by giving cash stipends ($5 per child, per month) to mothers. Even though the payments are small, it helps poor families increase their quality of life. Until 2006, *Bosca Escola* has reached 8.7 million children and 2.5 million parents.

declined in recent years. According to McCulloch and Grover (2010), participation in the labour force for workers aged between 12 and 14 has fallen by between 17 percent and 24 percent per year, and, participation for workers aged 15 to 17 has declined by 9 percent. In response, school enrolment and attendance among primary and lower secondary students has increased. The recent findings [18] of working children in Indonesia show that, from the population of children aged 5 to 17 (58.8 million), 6.9 percent (4.05 million) were considered working children. From this quantity, 81.8 percent (48.1 million) were attending school. Therefore, 41.2 percent (24.3 million) were involved in housekeeping and 11.4 percent (6.7 million) of the children were neither in school, nor housekeeping, nor working (idle).

2.6.2 Determinants of Child Labour in Indonesia

Studies in Indonesia show that older children are more likely to work, and boys are also found to be more likely to work than girls (Priyambada et al, 2005; Chang, 2006; Triningsih and Ichihashi, 2010). Employed children below the age of 15 are found in small and medium-scale factories, working the same hours as adults (8 to 10 hours per day) and being paid either by piece rates or a daily wage. Pitriyan (2006) reports that the number of labouring children in district[19] levels in Indonesia is more than those in municipalities[20], due to a better access to education. The majority of working children in district level are boys, while, in municipalities, girls dominate the proportion of working children.

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[18] The 2009 Indonesia Child Labor Survey (ICLS) is a sample based household survey dedicated exclusively to collect some basic data on economic and noneconomic activities of children aged 5 to 17.

[19]The main sector of employment is in agriculture. For socio-cultural aspects, population in district area has low level of education and low level of health with a lower GDP value compared to the municipality.

[20] Opposite to the district level.

In terms of a parent's education, mother's educational attainment has a greater impact than that of father's. In particular, there exists a negative relationship between parents' years of schooling and a child's likelihood to work, with a statistical significance level of 1 percent (see also Priyambada et al, 2005). Tringingsih and Ichihashi (2010) find similar results when comparing the education of the father to the mother. Mother's education is more significant, which means mothers have more bargaining power in deciding on sending or not sending the child to the work. This finding is also supported by Chang (2006). In particular, in rural areas, mothers have more bargaining power because they are more likely to stay at home, and consequently are closer to their children. However, in urban areas, fathers have more bargaining power in deciding the status of their children, since they are household heads and since both mother and father are usually working.

The sector of parental employment correspondingly plays a significant role in determining the likelihood of a child's work. According to Priyambada et al. (2005), household heads who work in the agricultural sector are more likely to send their children to work than those who work in the non-agricultural sector (see also Pitriyan, 2006). In addition, household-heads, who work as family workers, are also more likely to require their children to work than those who work self-employed or as wage-labourers.

The initial reason why children were involved in the labour market was to support their families, contribute to overall household income and to earn a living for themselves, which, in turn, can help to pay for their own education (Evans, 2009). Poverty plays a major role in the vulnerability of children and child labour in Indonesia (see Chang, 2006; Priyambada et al. 2005). Using the Indonesia Family Life Survey (IFLS) (1997

and 2000), Chang (2006) found that as income increases, children's work likelihood will fall at a diminishing rate. In particular, for per capita expenditure greater than US$32.40 per month, the likelihood of boys working will increase with income. However, the impact from having a higher income is not significant in mitigating the likelihood of girls' work. Bessell (1999) showed that among the poorest 20 percent of households, about 10 percent of household expenditure was spent on children in primary schools. Additionally, about 18.5 percent and 28.4 percent was spent on the junior secondary school and senior secondary school children, respectively.

Chang (2006) also found that land ownership was positively associated with child labour. This positive correlation entails the fact that land ownership offers readily available work for children who serve as an inexpensive source of labour, thus dominating the wealth effect from asset ownership. As in the study by Triningsih and Ichihashi (2010), land ownership is significant for child labour, which implies that children in rich-lands households are more likely to be child workers than the children in land-poor households.

Evidence on the trade-off between work and school reveals that working does not always completely eliminate a child's opportunity to obtain a formal education, as only a half of child workers do not attend school. On the other hand, children who work have a 30 percent lower probability of attending school more than those who do not work (Priyambada et al. 2005). Manning (2000) studies the economic crisis and child labour in Indonesia and provides evidence of high dropout rates from primary schools and low continuation rates from primary to lower secondary schools. According to Amin et al. (2004), gender differences in attendance rates among children are statistically

significant at the aggregated level and show that girls are more likely to remain enrolled in school and perform schoolwork compared to boys (see also Hsin, 2007).

Focusing on the effects of child market work on the long-term growth of human capital, Sim et al. (2012) used the outputs of the human capital function such as numeracy skills, cognitive skills and pulmonary function as measures of human capital among working children in Indonesia over a 7-year period. They implement 2SLS estimation on the National Labour Force Survey (SAKERNAS) 1986–2007 and two waves of Indonesia Family Life Survey (IFLS) 2000–2007 and find a strong negative effect on child labour in terms of numeracy skills and cognitive skills. In particular, the probability of children who participated in market work in 2000 is reduced by 3.4% and 3.3% in numeracy skills and cognitive skills, respectively, compared to children who did not participate in market work in 2000. The adverse effects were found to be larger for girls than boys. Moreover, boys experience much smaller growth in pulmonary function (significantly affected) since they are mostly found working in areas with higher levels of air pollution. This study also confirmed that children who were working outside for a wage have a much lower growth in skills and pulmonary function compared to those who were working in the family business because of the longer working hours allocated while working outside the family.

2.6.3 Policy Intervention

Bessell (1999) focused on legislative and policy responses to child labour in Indonesia for international aspects of interrelationships between norms, standards and ideals. The first legislation was under Dutch Colonial rule, which is known as the Dutch Colonial Government Ordinance of 1925, where children under the age of 12 were prohibited to

work. Later, the age was amended from the age of 12 to 14 in 1945 when Indonesia declared independence. In particular, children under the age of 12 could not work with mechanical equipment in closed factories and were prohibited from working in closed factories with more than ten other employees on staff. Moreover, children could not also be employed in places that were deemed to be dangerous and could not work between the hours of eight p.m and five a.m in the morning. The second wave of child labour laws brought about a slight change, where a ministerial regulation was issued in 1987. This regulation did not prohibit child labour but set new regulations, which meant that children under the age of fourteen could work four hours a day if they had parental consent. These children would be paid minimum wage and could work at night, but were prohibited from working in hazardous occupations.

The third wave of Indonesia's child labour laws focused more on the abolition of child labour (early 1990's). This wave succeeded in bringing up child labour problems to the public and has been discussed in political agendas worldwide. The five year education plan extended basic education from six years to nine years, which should be completed by the age of fifteen. In 1992, the Government of Indonesia signed a memorandum with ILO-IPEC (International Labour Organization-International Programme on the Elimination of Child Labour) regarding the child labour issue and the way to prevent it. Poverty is identified as a major problem in Indonesia and financial support is needed to overcome the situation. Bessell (1999) concluded that the first wave had limited support from government; the second wave has a greater response because of *Proyek Kerja*[21] (or work and learn) in addition to the third wave which has a significant response to

[21] *Proyek Kerja* was initiated in East and Central Java and later extended to North Sumatra, Lampung, Greater Jakarta, West Java, Central Java, DI Yogyakarta, East Java, Bali and East Kalimantan. This program was a response to the extremely low levels of education among working children and involved the cooperation of employers. It aimed to provide children with non-formal education within their workplace.

forbidding child labour and it became national interest until Indonesia's 1997 Legislation.

In July 2005, the Government of Indonesia provided subsidies to schools, known as School Operational Assistance (*Bantuan Operasi Sekolah*) in the primary and junior high school levels. This programme is intended to reduce the burden of the poor and of the costs of education after the fuel price rise (Suharyo et al, 2006). The first implementation of Direct Cash Transfer (*Bantuan Langsung Tunai*) in October 2005, was aimed at helping the poor families in order to cope with poverty due to the increase in gas prices. The fund is taken from the partial cut of gasoline subsidies and transferred into household subsidies (Widjaja, 2009). Triningsih and Ichihashi (2010) investigate the relationship of those policies and child labour using Indonesia Family Life Survey 4 (IFLS4) in 2007. To analyse the probability of child labour, they use probit regression with the dependent variable, $dWork$ taking the value 1 if a child is working and 0 otherwise. The independent variables include child and household characteristics, farming variables, policy variables and economic growth variables. Generally, the School Operational Assistance fund has a negative relationship with child labour. The programme seems to have increased school attendance and decreased the likelihood of the children going to work. However, Direct Cash Transfer Program has a positive relationship with child labour, which means the program is not effective in the reduction of child labour. Triningsih and Ichihashi (2010) concluded that the approach to reduce the child labour is through some subsidy given for education (in this case is School Operational Assistance), so that children will be more likely to go to school. However, the direct cash transfer program seems ineffective in reducing the incidence of child labour even though the program gives additional income to parents, since this program is just temporary program due to the increasing price of fuel in Indonesia.

CHAPTER 3: DETERMINANTS OF CHILDREN'S ECONOMIC ACTIVITY IN INDONESIA.

3.1 Introduction

Child labour is known as a multi-faceted issue that has received attention from policy makers at both national and international levels. This problem is widespread and is also prevalent in rich and industrialized countries as well as poorer ones but the incidence is less in rich countries compared to poor countries. Most of the children in rural areas of developing countries are found to be engaged in domestic tasks and assisting in the family farm. Despite the fact that the tasks they carry out are not classified as 'hazardous' forms of child labour, it may still have adverse effects such as permanent loss of education (Krutikova, 2006). In addition, children who are involved in the agricultural sector are exposed to health hazards that might affect their daily life. Thus, since child labour is usually detrimental to health and exploitative in nature, efforts in eliminating child labour are essential for sustainable development (Murad and Kalam, 2013). It is therefore desirable to find the determinants of child labour that can generate a possible way to eliminate child labour.

The issue of child labour in Indonesia captured public attention during the economic crisis, which started in mid-1997. The proportion of children with the age of 10-14 years who worked slightly increased from around 7% in 1997 to around 8% in 1998 during the first year of the crisis (Priyambada et al. 2005). The rate then fell back to 7% in 1999. Indonesia has ratified the International Labour Organization (ILO) convention on minimum age for employment which states that the minimum age of workers is 15 years old, but the problem of child labour still persists. Children in Indonesia are found selling newspapers, candies, and drinks, or become beggars at intersections or on public

buses. Although the incidence of child labour in Indonesia has been relatively low compared to other Asian countries, the problem remains significant.

The literature on child labour has identified several critical supply and demand factors (Grootaert, 1998). In particular, the formal analysis of child labour is closely related to the modelling of household behaviour with standard constrained utility maximization model of household and includes equations explaining the supply of labour of different household members comprising children. Theoretically, the time allocation in this model of household is not chosen by children, but more likely by the parents. In household decision-making process, children's time must be allocated between labour and non-labour activities in addition to a combination of both. Particularly, private returns to each activity should be considered. Therefore, each household allocates time of their children to wherever the perceived return is highest, until the marginal return is equalized across all uses of child's time (Dar et al. 2002). Time allocation decisions primarily depend on the marginal productivity of labour, the prices of market goods, and the value of unearned income. According to Binder and Scrogin (1999), households would tend to produce commodities with relatively more home labour if the market wage is low and the price of market goods is high.

Thus, there is an enormous collection of literatures on determining the factors of child labour which look at various determinants, ranging from parental schooling (Chang, 2006), wealth, household composition to trade and globalization (Edmonds and Pavcnik, 2002). This chapter investigates the determinants of child labour in Indonesia including child, household and community characteristics. It is aimed at reaching a better understanding of the child labour phenomenon by determining factors that influence the involvement of children in work, regardless of the children's other activities. The main contribution of this chapter is to carry out the empirical

investigation of the impacts of family affluence, especially the role of the head of the household on the decision to send a child to work. The definition of work done by child labour for this chapter excludes household chores such as fetching water and wood, cooking, cleaning, child care and other similar activities undertaken by children in the household. It has been argued that child work is strongly related to poverty, and it is common sense to accept that the poorer the household, the poorer the district or the poorer the country, the higher the prevalence of child labour. This chapter provides estimations for boys and girls, and urban and rural decisions separately. Aggregating boys and girls labour, and urban and rural child labour is normally done in some empirical studies, which could obscure the differential impact of some factors on gender-divide and region-divide work decisions. The most common discussion in explaining the children's participation to income generating activities are based on the Luxury Axiom, proposed by Basu and Van (1998). According to this axiom, the household will send the children to work if and only if the non-child labour income significantly falls. Therefore, this chapter also tests the presence of Luxury Axiom along with other determinants that might have an influence on the supply of child labour. There are certain thresholds[1] where people will have difficulties to survive, and they do not have much of an option between work and non-work. In certain conditions, such as the death of the adult breadwinner or a natural disaster that has torn normal family life apart, children may have to work in order to survive (Lieten, 2003).

The remainder of this chapter is organized as follows. A brief introduction of context is in Section 3.2. Section 3.3 provides a brief definition of child and child labour. The incidence of child labour in Indonesia is discussed in Section 3.4. A brief review of data sets with an explanation of dependent and independent variables with the descriptive

[1] Defined by nutrition, sanitation, health and shelter.

statistics of the used data sets are discussed in Section 3.5 and Section 3.6. Section 3.7 presents the econometrics specification of the used models and Section 3.8 reports the results from the estimation of probit models. Section 3.9 describes the poverty and child labour option and Section 3.10 discusses the potential endogeneity of household income. Finally, Section 3.11 summarizes and concludes the chapter.

3.2 The Context: Indonesia

Indonesia is well-known as a large archipelagic country with a mainly young population. It covers 3.5 million square kilometres of sea area and 1.9 million square kilometres of land area, encompassing more than 17 thousand large and small islands. The country consists of 33 provinces and nearly 500 districts (UNICEF, 2009). Indonesia has made a significant progress in reducing poverty since 1970s and is known as one of the most successful countries in the world in reducing poverty. In 1976, around 40% of the population were living below the official poverty line. This dropped to around 17% in 1996. However, subsequent to being hit by the financial crisis in 1997-1998, national poverty rate increased from around 17% in 1996 to 24% in 1999. The crisis led to an increase in the number of poor. A new standard of Statistics Indonesia' poverty line calculation shows a decline in poverty rate from 18.2% in 2002 to 13.3% in 2009 (Suryahadi et al, 2012).

Government of Indonesia has discussed poverty as a high priority objective and has various plans to overcome the issue. In 2001, the government formed the inter-ministerial Poverty Reduction Committee to implement a set of comprehensive and harmonized actions in poverty reduction. At the national level, stakeholders prepared an Interim-Poverty Reduction Strategy Paper (I-PRSP), a road map for the development of

the National Strategy Poverty Reduction (SNPK). Then, the 2004-2009 Medium-Term Development Plan (RPJM) incorporated the SNPK, which set poverty reduction targets linked to the Millennium Development Goal. The target was to reduce the quantity of the poor to 8.2% by the end of 2009 by focusing on pro-poor growth, improving justice and law enforcement and enhancing a sense of safety and security (Ministry of National Development Planning, Republic of Indonesia, 2006).

Life expectancy increased from 65.65 to 69.32 years between 2000 and 2011, while child mortality declined from 35% to 26% between 2004 and 2012 (World Bank, 2011). Literacy rate increased in Indonesia during the period of 1992- 2010. In 1992, the literacy rate was 81.45%, whereas in 2010 the literacy rate was 93.02%. However, there was a significant gap in enrolment rate ration between male and female population, with an average of 8%. This gap decreased to 5% in 2012. Enrolment rate at elementary school was quite high and increasing with time. However, there was no significant effect on enrolment rate during the period of the economic crisis. The implementation of nine years compulsory basic education in Indonesia led to positive growth of net enrolment rates at junior high school level. During the period of the crisis, the rate was fluctuating where female population tended to have higher enrolment rate than male population. In contrast, the net enrolment rate for senior high school was relatively low with the proportion of children aged 16-18 years who enrolled in school was around 50%. In addition, the percentage of population aged 19-28 years who enrolled in tertiary education level was no more than 10%, in 2012.

3.3 Defining Child and Child Labour

International Labour Organization (ILO) Minimum Age Convention, 1973 (No. 138) and United Nations Convention on the Rights of the Child[2] define children as persons who are below the age of 18 years old. Generally, they have less right compared to adults and are identified as those who are not able to make serious decisions[3], and therefore, they legally should be under the responsibility of an adult. The definition of a child in Indonesia has changed from time to time. Article 1 of Act Number 12 Year 1948 stated that a child is a male or female person aged less than or equal to 14 years old. Article 1 of Act Number 25 Year 1997 concerning manpower specified that a child is a male or female person aged less than 15 years old. In addition, Act Number 13 Year 2003 concerning manpower defined a child as every person who is under 18 years old. The first two Acts are no longer applicable. Thus, according to Indonesian law (Act Number 13 Year 2003), a child is considered as every person who is under 18 years old (Budiyono, 2000).

According to Article 2 of Act Number 12 Year 1948, a child is not allowed to work and entrepreneurs are not allowed to hire a child. This is constituted in Article 95 Subsection (1) of Act Number 25 Year 1997 and Article 68 of Act Number 13 Year 2003. However, there is exemption for children aged between 13 to 15 years old to do light work that does not stunt or distract their physical, mental and social developments. Based on the definition given by ILO of Convention 138, child labour is considered as a child aged below 15 years old that actively participates in economic activity. Economic activity involves productive activities by children such as casual, unpaid and illegal work, including work in the informal sector. However, this does not cover household chores in the child's own household. Technically, the term child labour refers to

[2] Definition of the Child. Retrieved November 11, 2011 from http://wcd.nic.in/crcpdf/crc-2.pdf
[3] *Ibid.*

'children in employment' for at least one hour during the reference period. On the other hand, child labour is described as the participation of school-aged children on a regular basis in the labour force in order to earn a living for themselves or to supplement household income (Canagarajah and Coulombe, 1997).

However, not all types of employment are considered as child labour. ILO[4] defines child labour as work conducted by children that denys them of their childhood, potential and dignity, and that is damaging to their health, physical and mental development. The work also refers to any activity that interferes with their schooling[5], requiring them to combine schooling with excessively long and heavy work. According to United Nations Children Fund (UNICEF)[6], the term child labour covers the worst forms of child labour including prostitution, pornography, slavery and other illicit activities that is likely to harm children's health, safety and morals. Children are classified in child labour when they are in employment below the age of 15 and are involved in hazardous unpaid household services for long hours, in an unhealthy work environment, in a dangerous location with unsafe equipment or heavy loads.

However, child labour in 'hazardous work' and 'worst forms' are hard to identify in reality by a household survey. Therefore, child labour covers working children who are engaged in any kind of work as indicated by who are reported working during the survey. As reported in Statistics Indonesia's publication of 'Working Children in Indonesia 2009' based on the age group and type of work, child labour consists of

[4] International Labour Organization: About Child Labour. Retrieved Dec, 13 2011 from http://www.ilo.org/ipec/facts/lang--en/index.htm

[5] The work deprives children of their opportunity to attend school and requiring them to leave school earlier than others.

[6] UNICEF: Child Protection from Violence, Exploitation and Abuse-Child Labour. Retrieved Dec, 14 2011 from http://www.unicef.org/protection/57929_58009.html

components as shown in the Table 3-1. It clearly shows that child labour[7] consists of all working children aged 5 to 12, regardless of their working hours, children aged 13 to 14 working more than 15 hours per week (they are allowed to be engaged in light work) and children aged 15 to 17 working more than 40 hours per week (40 hours as an indicator for hazardous work). Nevertheless, hazardous works remains difficult to measure by the survey.

A cut-off age 10-17 years is selected for this analysis. Because of data limitation, the lower age limit is 10 years since information on employment is collected only from individuals age 10 and above in both data sets. This study includes those children who are above age 14 as well (15-17 years), for the main purpose of the analysis to determine the factors of their involvement in non-leisure activity. In addition, those children above the age of 14 are still considered as school-age children and their time allocation is associated with household's decision-making process. The justification for selecting 17 years as the maximum age cut-off since the data suggest that there are some children in these age group of 10-17 years who are still in primary school. According to the education system of Indonesia, student at the age of 17 years should be at the end of secondary school. However, a few children have a late enrolment, especially in rural areas which is common in Indonesia. Thus, inclusion of children aged 17 years allows us to consider late entry, grade repetition and misreporting of age. Normally, children under the age of 18 years never leave home, except for daughters who join their husbands' family after marriage.

[7] The definition of child labour and age-group limits may differ across countries depending on the national circumstances. In Indonesia, 5 years is the official age in countries for entry to compulsory primary level schooling, 12-14 years are allowed to do light work that is permissible by legislations and 15 years reflects the age at entry to labour market.

Table 3-1: Framework for Statistical Identification of Child Labour

Age Group	(1a) Light work	(1b) Regular work	Worst Forms of Child Labour	
			(2a) Hazardous work	(2b) Worst forms of child labour other than hazardous work
Children below the minimum age specified for light work(for example, 5-11 years)	Employment below the minimum age for light work[8]	Employment below the general minimum working age	Employment in industries and occupations designated as hazardous, or work for long hours and/or at night industries and occupations not designated as hazardous	Children trafficked for work; forced and bonded child labour; commercial sexual exploitation of children; use of children for illicit activities and armed conflict
Children within the age range specified for light work (for example, 12-14 years)				
Children at or above the general minimum working age (for example, 15-17 years)				

Source: Working Children in Indonesia, 2009.

Note:

Denotes child labour.

Denotes activities not considered child labour, and is permissible work by children.

[8] Entrepreneurs who employed children to do light work have to meet these following requirements: (a) the entrepreneurs must have written permission from the parents or guardians of the children, (b) there must be a work agreement between the entrepreneur and the parents or guardians, (c) maximum three hours working a day, (d) the work conducted during the day without disturbing schooling time (e) occupational safety and health, (f) a clear employment relations, and (g) receive wages in accordance with the prevailing provisions.

3.4 Incidence of Child Labour in Indonesia

Child labour remains a serious problem in Indonesia. An estimated 6 to 8 million children exceeded the legal 3-hour day limit and worked in the informal, rather than formal, sector[9]. The majority of children found working in Indonesia are in rural areas. They usually worked in agriculture, construction projects, brick kilns, in the fishing and farming industries, and in mines and quarries. Some children worked in large factories and they usually worked similar to adults.

The condition of child labour worsened after the tsunami of December 26, 2004 and the Yogyakarta earthquake of May 27, 2006 hit Indonesia. They left thousands of children orphaned or separated from their families[10]. Consequently, approximately 2,500 children in Aceh were placed in orphanages at a high risk of exploitation. Poverty is undoubtedly a dominant factor in the use of child labour. The 1997–98 economic crises were found to contribute to poverty among families, forcing more and more children in Indonesia to work to earn enough money to survive. In other words, poverty produces child labour, while child labour perpetuates poverty, which leads to future poverty[11]. Since these children have no bargaining position, they suffer worse conditions than the adults. In addition, the cost of child labour is cheap and the children would not protest or strike, unlike adult labourers[12]. Therefore, companies prefer to hire children compared to adults.

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[9] Indonesia Human Rights Report: Status of Child Labour Practices and Minimum Age for Employment. Retrieved Dec 15, 2011 from http://www.ncbuy.com/ reference/country /humanrights.html?code=id&sec=6d

[10] UNHCR: 2007 Findings on the Worst Forms of Child Labour-Indonesia. Retrieved Jan 25, 2012 from http://www.unhcr.org/refworld/country,USDOL,IDN,4562d8cf2,48caa477c,0.html

[11] Lingard, K. (2008). World-Wide Bulletin: Child Labourers at Risk in Indonesia. Retrieved Oct 26, 2011 from http://neovox.journalismautralia.com/child_labourers_iah.php

[12] Dursin, R. (2000). Asia Times: Indonesia's Working Children Find No Rest. Retrieved Oct 26, 2011 from http://www.atimes.com/se-asia/BF24Ae01.html

According to the Ministry Social Affairs in 2005, which is reported by ILO (2009), there were 46,800 street children across 21 provinces in Indonesia. Large numbers of street children also found in Jakarta and other major urban centres. These children still live with their parents and few of them live in shelters. A literature study conducted by Bina Mandiri Foundation and commissioned by UNESCO in 2005 also found that more than 50% of these street children are still at school. According to Manning (2000), activities undertaken include the sale of numerous drinks, food and newspapers, street singing and shoe polishing and these are primarily apparent in larger cities throughout the country, especially in Java and in Jakarta. It is also estimated that more than 1.5 million children aged 10-17 years are working in the agricultural sector in Indonesia. The largest incidence of the child labourers in agricultural sectors are in the province of North Sumatera (155,196 children), Central Java (204,406 children) and East java (224,075 children). These children are more likely to work in tobacco plantations, rubber plantations and palm oil plantations. In tobacco plantations, children work for 7-9 hours a day on watering, planting tobaccos and preparing lands. Children in rubber plantation work as adults do, which is to make incision in rubber trees to tap rubber sap and put vinegar in rubber sap to make it fluid. To complete the task, they spend 4-6 hours of their time per day. In addition, children in palm oil plantations spend almost 4 hours per day on palm picking, collecting loose palm fruits and carrying a load with an average of 10 kilograms over a distance of 250 metres. They were paid in cash; however, 84 percent of children's earnings are given to their parents.

Children in Indonesia are also being exploited for sexual purposes. According to Hull et al. (1997), girls have been trafficked to be concubines since the beginning of the Javanese kingdom era. Based on the information collected by the Ministry of Social Affairs (MOSA) in 2003, about 5,724 people are involved in prostitution in Jakarta and

around 1,020 of them were younger than 18 years. In West Java, it is estimated to have 6,276 people in prostitution and a possible 1,800 of them were younger than 18 (ILO, 2004). Data on the number of children and adults in prostitution recorded by MOSA showed an increase from 65,069 in 1994 to 87,536 in 2004 for the whole of Indonesia.

The recent child labour survey in Indonesia reports that about 4.05 million or 6.9% of children aged 5 to 17 years are considered as working children[13] and almost 43.3% of them were child labour[14]. Most are more likely to be male than female[15]. Working children are more common in the informal sector. About two-thirds of these children work as unpaid family workers. In particular, 24% of working children were employees, only 10% were self-employed and 65% were unpaid family workers with the ratio of 146 boys for every 100 girls. In terms of occupation, about 53% of working children were engaged in agricultural-related work such as animal husbandry, forestry, fishing and hunting[16]. The survey further reports that school participation rates are still high, at about 80% for almost all children aged below 15 years. In particular, the rates are higher in urban areas than in rural areas and are almost the same for boys compared to girls.

[13] 'Working children' is refer to a positive participation of children in the economics activities which is not detrimental to their health or mental and physical development (a beneficial work that encourages the child development).
[14] 'Child labour' is refer to all the kinds of work which occur in violation of the international conventions.
[15] ILO: Working Children in Indonesia 2009. Retrieved June 21, 2011 from http : / / www.ilo .org /jak arta/whatwedo/publications/WCMS_123585/lang--en/index.htm.
[16] *Ibid.*

3.5 Data

This study uses data of The Indonesia National Socioeconomic Survey[17] (SUSENAS), 2005 and 2007. SUSENAS is a series of large-scale multi-purpose socioeconomic surveys, first conducted in 1963. The general objectives are to gather complete, accurate and timely data on important characteristics of the population which are closely related with measurement of well-being in various categories of the Indonesia population. In particular, SUSENAS provides raw data about people welfare which is important to make policies and as a tool to evaluate development. Moreover, SUSENAS also provides detail data about household consumption expenditure, sufficiency of nutrition consumption, expenditure distribution and poverty level estimation. This pioneering survey includes all the provinces in Java consisting of 16, 000 households. A larger sample and wider geographical coverage was conducted in a year after (1964) consisting of 21, 000 households from the entire province and after a period of two years, in 1967, the sample size was raised to 24,000 households. The next surveys wereconducted in 1969, 1970, 1976, 1978, 1979 and 1981 and fielded each year or two since then by Statistics Indonesia (BPS).

Instead of the mailing system, the interview method of interviewing each of the household in the sample was utilized for SUSENAS's data collection.. The reasons for not choosing the mailing system were due to the fact that many homes do not have addresses, which contribute to very low returns and the inappropriateness of the answers to the questions. Therefore, the interview system may obtain more accurate data, even though it is more costly and difficult to have respondents who are willing to

[17] Estimations are run for the National Labour Force Survey (SAKERNAS) as well. However the results are not much different from the SUSENAS data sets. The SUSENAS data sets were chosen since they have information on the presence of children aged below 10 years and on land ownership compared to SAKERNAS.

spend their time for the interview. The interviewing was conducted by personnel trained by Central Bureau of Statistics.

In response to the demand of the data, the survey covers a nationally representative sample composed of 200,000 households since 1993. Each survey contains a core questionnaire which consists of demographic, education and employment characteristics of household members, as well as additional information such as health care and nutrition, housing information, household income and expenditure, and labour force experience. The collected data for SUSENAS are divided into two categories, namely core data and module data. The core data are collected annually with the sample size of 200,000 households. However, module data have a sample size of approximately 65,000 households and are collected every year with a different topic annually covering Indonesia both provincially and nationally.

The survey records data of household and individual characteristics at all ages in terms of health, family planning, education and employment (for individuals aged 10 years and above who were reported working during the survey) information. For those who were working, questions are asked about the total durations of work (this information is not provided in SUSENAS 2007), as well as the occupation and sector of employment, including monthly earnings for all wage earners in the household. Furthermore, information of housing characteristics, household expenditures and other social economic information are also provided in SUSENAS. SUSENAS 2005 is chosen for the analysis since there is information of land ownership provided in the questionnaire. The next two years of SUSENAS are used to investigate the trends or changes in the incidence of child labour and child schooling. Altogether, about 268,848 households were chosen where 1,099,950 individuals were interviewed in 2005. In 2007, 285,186 households were included in the sample and 1,167,019 individuals were interviewed.

Although SUSENAS contains all levels of children age, children's activities are only collected for children with the age of 10 years and above. In particular, SUSENAS records data on individual household members characteristics including activities during previous week such as working, temporarily not working, looking for work, attending school, doing housework and others. For those who were working, questions are asked about the total hours of work (this information is not provided in SUSENAS 2007), as well as occupation and sector of employment including monthly earnings for all wage earners in the household. Therefore, our sample consists of 155,660 children comprising 82,639 boys and 73,021 girls in 2005. In 2007, the sample consists of 156,248 children with 85,026 boys and 71,222 girls.

Table 3-2 illustrates the distribution of children with the age of 10-17 years according to past week activities reported in each year of the survey. Regarding this population, 10.2% were employed in 2005 (column 1) and the percentage increased by almost 3% in 2007. The lowest percentage of employed children was reported in 2005, the records of children looking for work were higher than the other year.

Table 3-2: Distribution of Children Aged 10-17 Years According to Past Week Activities.

Category	**SUSENAS**	
	2005	**2007**
Total Number of Children (in thousands)	155660	156248
Labour Force (% out of total number of children)		
Employed	10.22	12.99
Look for work	2.78	1.44
Not in Labour Force (% out of total children)		
Schooling	85.56	82.02
Others	1.44	3.55
Total (%)	100.00	100.00

Source: Author's calculation from SUSENAS 2005 and 2007.

Regarding this population, about 10.22% of them were employed in 2005 and the percentage increased to 12.99% in 2007. However, the percentage of children who are looking for work has

decreased overtime. For those not in the labour force, there is a fall in the percentage of children aged 10-17 years who are enrolled in school (86% to 82%). Others are classified in other activities that do not fall into schooling or working categories. In other words, 'others' can be classified to be in housework, idle children, have finished schooling and not looking for work or staying at home because they cannot afford to go to school. The table shows that more children are recorded to be engaged in other activities in 2007 compared to 2005.

3.5.1 Dependent Variables

To explore the determinants of child labour, probit model is used with a binary dependent variable that represents child labour and non-child labour status of respondents. There is one section of employment in the questionnaire for household members aged 10 years and above that asks the following two questions:

a) *Did you do any of these activities (such as 1. working, 2. attending school, 3. housekeeping and 4. others) in the last one week? (Yes or No for each activity).*
b) *From the above activities, which one consumed most of your time in the last week?*

Since the second question asks about the activity that consumed most of the time, it can be used to be defined as the main activity during the previous week This information is used to create '*working*' activity (dependent variable). The dummy variable of child labour is equal to 1 for those children who are reported to be working regardless of other activities and 0 otherwise. Household chores are not included in our definition of child work. According to the Article 32 of The Convention on the Rights of the child,

"every child is protected from any economic exploitation and from performing any work that is likely to interfere with the child's education, or to be detrimental to the child's health or physical, mental, spiritual, moral or social development" (Zapata, 2006, pg. 2). Generally, household chores are considered as additional responsibilities, which is a part of the process of growing up in a family. In addition, the definition of child work in our analysis does not exactly refer to the definition of child labour given by UNICEF which refers to the worst forms of child labour in certain illicit activities that could be harmful to their health and morals. Thus, the sample includes all individuals who are reported working as self-employed, employees, casual workers and unpaid workers.

3.5.2 Independent Variables

Previous studies on child labour suggest that child labour is influenced by different factors. The following section presents these factors. A detailed description is given in Table 3-A1 of Appendix 3-A.

3.5.2.1 Child Characteristics

According to Priyambada et al. (2005), labour market participation of children is influenced by their age. In particular, the probability to enter the labour market is higher as the child gets older, so older children are more likely to work. Therefore, to control the age factor, dummy variables for children with the age of 10-12 years, 13-14 years and 15-17 years were created to have a clear picture on their involvement in working. Child's gender also plays an important role on explaining their participation in the

labour market. Generally, child labour incidence is significantly more prevalent among boys than girls. However, according to Canagarajah and Coulombe (1997), boys are found more likely to go to school compared to girls in Ghana. Hence, dummy variables for girls are created to investigate the participation of females compared to males in working.

Furthermore, the blood-bond between parents and children shows the basis for parental altruism towards their children. Therefore, the dummy variable of a "biological child to the household head" is included to investigate the parent's favouritism towards their own children compared to other children in the household. In a study by Moyi (2011) of child labour in Kenya, a biological child of the head of the household was found to have a lower probability of working compared to a non-biological child of the head (see also Ndjanyou and Djienouassi, 2010).

3.5.2.2 Household characteristics

The head of the household's characteristics such as age and gender is related to the child labour phenomenon. Child labour is more prevalent among households headed by females than by males. As found in Indonesia by Priyambada et al. (2005), the incidence of child labour among female-headed households was 9% to 10%, which is 2% to 3% higher than the prevalence of child labour among male-headed households.

In the case of household head's education, empirical studies show that the level of parents's education is negatively associated with the probability of child working. Nwaru et al. (2010) finds that the education of household head was negatively associated with child labour in Abia State of Nigeria, and it was significant at 1% level (see also Fafchamps and Wahba, 2004, Carvalho-Filho, 2008 and Okurut and Yinusa,

2009). According to Priyambada et al. (2005), the choice of the employment sector of children in the labour market is affected identically by the employment sector of their household heads (basically their parents). A study by Parikh and Sadoulet (2005) finds that children are more likely to work if their parents are working as self-employed or employees compared to children of employers, regardless of the sector of parent activity. Furthermore, they also concluded that children are more likely to work in areas with high average adult employment rates.

Generally, large households have more labour availability to cover insufficient capital to send all children to school and cover expenses (Kamga, 2010). In addition, the probability that children go to work is higher with a larger household size since the high number of individual in the household decreases income per capita which increases the dependency ratio (Jeong, 2005). Hence, household size is positively related to work. Furthermore, child's birth order was found to be an important factor on child labour decisions of a family. Empirical studies found that sons who are 'first-born' are more likely to work than later-born sons. According to Emerson and Souza (2008), early born children could command relatively higher wages than their later born siblings. Thus, they are more likely to be sent to work as child labourers. On the other hand, when the households are financially constrained, earned income by older children might be used to finance the education of younger children.

Incidence of child labour is often related to poverty. Hence, it is often argued that child labour is a function of family income (Grootaert, 1998). In particular, low-income households may send their children to work to be able to accumulate sufficient household income, meaning that the probability to work increases as household income decreases. Furthermore, according to Rickey (2009), higher family income raises current consumption that raises the maximum amount that the head of the household

will be willing to pay for an extra unit of human capital. Therefore, household income (excluding the child's wage) is used as a proxy of household wealth to examine its effect on the probability of child working. However, based on a study by Rogers and Swinnerton (2003), upsurges in parental income do not always lead to upsurges in the probability to go to school and decreases the probability to work. Another negative income effect was found by Cartwright (1999) in rural Columbia, Cigno et al. (2001) in rural India, Ilahi (2001) for rural girls in Peru, Rosati and Tzannatos (2006) in Vietnam, Ray (2000) in Peru, and Ersado (2005) for rural children in Nepal, Peru, and Zimbabwe. It is therefore important to consider this effect on child labour in Indonesia.

3.5.2.3 Community characteristics

In many countries, child labours is mostly found to be a rural phenomenon (see also Canagarajah and Coulombe, 1997; Chang, 2006; Nyyssola, 2007). Working children are mostly concentrated in rural areas. The survey provides information on household location in rural or urban areas. Thus, the rural dummy variable is equal to 1 for a household that is located in rural areas and 0 otherwise. Furthermore, the location (province) of the household residence should also be used. Since provinces are not homogenous in terms of employment opportunities or the capacity, quality and distribution of school infrastructure, this factors might have an impact on the pattern and intensity of child labour. Therefore, dummy variables representing provinces in Indonesia are also included in the estimation. There are 33 provinces in Indonesia, officially grouped into 7 geographical units. Each province has its own local government, which is headed by a governor and has its own legislative body. The governor, members and local representative bodies are elected by popular vote every 5-

years [18]. However, five provinces have a special status. Firstly, Aceh is implementing Sharia Law as the regional law of the province. Special Region of Yogyakarta is the only province with a sovereign monarchy within Indonesia. Papua and West Papua are implementing sustainable development. Finally, the Special Capital Region of Jakarta is known as the capital and largest city of Indonesia and one of the most populous urban agglomerations in the world. Therefore, by listing all the provinces in this chapter, it can provide a clear picture of incidence of child labour for the whole country. SUSENAS 2005 included 31 of the 33 provinces. West Sulawesi and Papua were not included in the survey, while SUSENAS 2007 reported all the provinces.

3.6 Descriptive Statistics

Table 3-A2 and Table 3-A3 present the summary of explanatory variables' statistics used in this chapter for SUSENAS 2005 and 2007, respectively. Boys are more likely than girls to participate in economic activities and the incidence of child labour is higher in rural areas compared to urban areas over time. About 94% of children with the age of 10 to 17 years have a biological relationship to the head of the household. On average, the age of the head of the household is around 45 years and the proportion of female-headed household is extremely low in both years of the survey, showing that households are dominantly headed by males instead of females in Indonesia.

Almost 50% and 20% of the heads of the households have completed primary level and senior secondary level, respectively. The proportion of the heads of the households who have completed tertiary education is smaller across the time of survey and most of them

[18] Elections in Indonesia. Retrieved May 7, 2014 from http:// www.ifes.org/~/media /Files /Publications/White%20PaperReport/Indonesia%202014%20National%20Legislative%20Election%20FAQ.pdf

are found in urban areas compared to rural areas. Moreover, heads of households are more likely to work as employers, employees and self-employed rather than as unpaid workers or casual workers in both years of survey.

On average, the monthly household income in 2005 is IDR 980,000 (equivalent to USD$83.53) and IDR 1,030,000 (equivalent to USD$ 87.78) in 2007. This data also show that the mean of monthly household income is higher in urban areas compared to rural areas, and among girls than boys. On average, there are around 5 to 6 people in each household, and the number of children is higher in rural areas compared to urban areas. Almost 65% of the samples are located in rural areas.

Table 3-3 illustrates the mean of children and household characteristics with and without working children in the household. It clearly shows that older children are more likely to participate in economic activities than younger children.

Table 3-3: Sample Means for Children and Household Characteristics, SUSENAS.

Category	**SUSENAS 2005**		**SAKERNAS 2007**	
	With Working Children	**Without Working Children**	**With Working Children**	**Without Working Children**
Age	15.36	13.04	14.97	13.02
Gender (Female)	0.34	0.48	0.33	0.47
Number of Children in household	1.96	1.77	2.02	1.76
Household Income (IDR)	540145	1065213	562607	1096172
Living in rural areas (%)	0.78	0.63	0.81	0.63
Female Headed (%)	0.13	0.10	0.005	0.007
Household Head's Schooling Attainment (Years)	1.68	2.89	1.99	3.07

Source: Author's Calculation from SUSENAS 2005 and 2007.

The average age of children who work is slightly higher than those who do not work. Furthermore, girls are less likely to work. On average, households with working children have about 0.19 more children in their family than households without working

children in 2005 and increase to 2.02 in 2007. Moreover, the average income of household whose children are working is substantially lower than that of household whose children are not working. This can be clearly observed in both years. The largest difference of the sample mean between these two groups of children is shown by the household location. Particularly, working children are mostly found in rural areas compared to urban areas. Households headed by females tend to send children to work. Household heads with working children have a lower schooling attainment compared to household heads without working children across the years of the survey.

Table 3-4 shows the profile of child labour in Indonesia. Children in rural areas tend to participate in economic activities earlier than children in urban areas. On an average, the age of working children in urban areas is 15 to 16 years, and the average for children in rural areas is 14 to 15 years. Children in rural areas tend to work more than their counterparts in urban areas, and they work fewer hours compared to children in urban areas. This may be to fixed working hours per week. Furthermore, the costs of living in urban areas are higher compared to rural areas, so children have to work more. More than half of children work as unpaid workers, and they are found mostly in the rural areas. Few children are found working as employees through the years of the survey. In total, the higher proportions of child labour are found in rural areas than in urban areas. In addition, approximately 47% of working children are 'in school' in 2007. The figure for 2005 was 45%.

Table 3-4: Profile of Child Labour in Indonesia.

Category	SUSENAS	
	2005	**2007**
Average age		
Urban	15.69	15.43
	(1.51)	(1.74)
Rural	15.22	14.88
	(1.79)	(1.96)
Average hours of worked (per week)		
Urban	43.31	-
	(21.60)	
Rural	29.46	-
	(16.02)	
Proportion of child worker (%):		
Urban	35.21	34.68
Rural	64.79	65.32
Proportion of child worker as (%):		
Self-employed	7.26	5.54
Employer	3.56	3.88
Employee	18.07	21.01
Casual worker	6.48	1.44
Unpaid worker	64.63	68.13
School participation (%)	**45.51**	**46.91**

Source: Author's Calculation from SUSENAS 2005 and 2007.

According to Table 3-5, working children are mostly found in the province of North Sumatera during the years of the survey. Specifically, 9.6% of working children live in North Sumatera. This is followed by 8.2% in South Sulawesi and Central Java. The smallest figure is for the province of Maluku and North Maluku, with the percentage of 0.9 in both provinces and in the province of The Special Region of Yogyakarta (DIY) with 0.5%.

Table 3-5: Proportion of Child Labour in Indonesia by Provinces.

Province	SUSENAS	
	2005 (%)	2007 (%)
Nanggroe Aceh Darussalam (NAD)	2.9	2.2
North Sumatera	9.6	11.4
West Sumatera	3.0	3.0
Riau	1.7	1.7
Jambi	2.0	1.6
South Sumatera	3.1	3.1
Bengkulu	1.9	1.7
Lampung	2.6	3.2
Bangka-Belitung	1.8	1.5
Riau Islands	0.8	0.6
Special Capital City District of Jakarta (DKI Jakarta)	1.4	1.2
West Java	6.6	4.0
Central Java	8.2	5.6
The Special Region of Yogyakarta (DIY)	0.5	0.7
East Java	7.4	5.9
Banten	1.7	0.9
Bali	2.4	2.8
West Nusa Tenggara	2.3	2.5
East Nusa Tenggara	6.2	6.4
West Kalimantan	4.2	3.5
Central Kalimantan	2.9	3.6
South Kalimantan	3.0	3.0
East Kalimantan	2.0	1.2
North Sulawesi	1.1	1.6
Central Sulawesi	2.7	3.2
South Sulawesi	8.2	7.8
Southeast Sulawesi	3.3	5.1
Gorontalo	1.1	1.8
West Sulawesi	-	1.8
Maluku	0.9	1.7
North Maluku	0.9	1.6
West Papua	-	0.7
Papua	3.6	3.4

Source: Author's Calculation from SUSENAS 2005 and 2007.

Table 3-6 presents the average daily hours worked by age, gender and region based on SUSENAS 2005 data set. The daily hours reported in the table is for those children who are reported working in the survey. As noted in Section 3.3, SUSENAS 2007 did not provide information on working hours, thus, the following table only covers SUSENAS 2005. Boys work more hours than girls in 2005. In terms of region, children in urban

areas spent more hours in work than children in rural areas. In addition, working hours increased as children get older.

Table 3-6: Average Daily Hours Worked Among Working Children by Age, Gender and Region, 2005.

Age	Gender		Region	
	Boys	**Girls**	**Urban**	**Rural**
10	2.72	2.56	2.86	2.64
11	2.98	2.72	3.84	2.74
12	2.94	2.85	3.63	2.81
13	3.35	3.14	3.68	3.14
14	3.59	3.31	4.11	3.25
15	4.02	3.60	4.29	3.60
16	4.37	3.81	4.73	3.78
17	4.35	4.07	4.57	4.02
Total	**4.00**	**3.69**	**4.45**	**3.62**

Source: Author's Calculation from SUSENAS 2005.

3.7 Econometric Specification

We estimate a model of child labour using a probit model, which is a baseline estimation model to find out, in a more generic sense, factors explaining the participation of children in the labour market. The coefficients obtained in probit estimation only serve to provide a sense of the direction of the effects of the covariates on child's participation in the labour market and their significance. Therefore, the results cannot be used for magnitude of impact analysis. Hence, the marginal effects are presented to examine the magnitude of impact.

The probit model assumes that there is a latent variable Y_i^* that can be expressed as a linear function of variables that affect the probability of participation in child labour. Thus, the probit estimation is of the following form:

$$Y_i^* = X_i\beta + u_i, \quad i = 1, \ldots\ldots\ldots, n$$

Where, X_i is a set of explanatory variables (including child, household and community characteristics) for child i, β is the vector of coefficients that is estimated and u_i is the error term (is distributed according to the cumulative normal distribution function). The latent variable Y_i^* is unobservable and instead a dummy variable is defined as $Y_i = 1$ if a child participates in child labour and zero otherwise:

$$Y_i = \begin{cases} 1 \; if \; Y_i > 0 \\ 0 \; otherwise \end{cases}$$

As mentioned earlier, the estimated coefficients provide an indication of the significance and the direction of the effect of an explanatory variable on this probability. In order to determine the probabilities in percentage point, we need to calculate the marginal effects. Firstly, the probability of child labour force participation can be expressed as:

$$P(LFP = 1|X_i) = \int_{-\infty}^{\beta' x} \emptyset(z(dz)$$

Where, z is the probability density function of a standard normal variable and $\emptyset$ is the cumulative normal distribution. Since most of explanatory variables are dichotomous dummy variables, the average effect of X_i on the probability of labour force participation is given as:

$$\frac{\partial P(LFP = 1)}{dX_i} = \emptyset(\beta' X_i)\beta_k$$

Thus, these effects may be interpreted as the change in probability of labour force participation resulting from a change in one category of a variable to another. The average effects for discrete variable are calculated as:

$$P(y_i = 1|x_i = 1) - P(y_i = 1|x_i = 0)$$

These effects captures the marginal change in probability of a child working from an infinitesimal change in each independent, continuous variable, and by default, the discrete change in the probability for dummy variables[19].

3.8 Estimation Results

Table 3-7 and Table 3-13 provide estimates of the parameters in terms of marginal effects that affect the working decision of all children aged 10 to 17 years by a specific year with the results for boys and girls, and urban and rural areas separately. The subsequent results show the probability of working in terms of region by gender and are shown in Table 3-8 and Table 3-14. The results for children with the age of 10-14 years for 2005 are given in Table 3-9 and Table 3-10 and results for 2007 are shown in Table 3-15 and Table 3-16. Table 3-11 and Table 3-12 display the results for children with the age of 15-17 years in 2005, while Table 3-17 and Table 3-18 indicate the results for children with the age of 15-17 years in 2007.

3.8.1 Estimates of Probit Model (All Children)

The age dummies of the child are statistically significant on the probability of working (Table 3-7 and Table 3-13), hence children are more likely to work as they get older. In other words, the grown up children give more time to economic work (Chang, 2006; Ndjanyou and Djienouassi, 2010). Children with the age of 15-17 years are 9.6% more likely to work in 2005 compared to children with the age of 13-14 years. In contrast, children with the age of 10-12 years are 5.8% less likely to work (Table 3-7). For

[19] STATA Help Manual.

further results, Table 3-9 and Table 3-15 show estimates of the parameters based on two age groups; 10-14 years and 15-17 years. The results also support the probability of working upsurges with age.

In terms of gender, girls are almost 3% less likely to work compared to boys in 2005. The figure for 2007 is 4%. The absence of biological tie with the household head increases the working probability of the child. In particular, biological children are 6.9% less likely to work compared to other children in the household in 2005 and 2007. The same findings were also observed in Ethiopia by Bhalotra (2003) and in Nigeria by Badmus and Akinyosoye (2008).

Children are less likely to work as the age of the household head increases. Decreases in the probability of working children may be due to the working experience gained by the household head to higher accumulated resources over time, thereby increasing income so there is less need for income from child labour. There is no significant effect for female headed household on the probability of working for the pooled sample. However, in terms of age, children with the age of 10-14 years are 2.8% more likely to work if the household is headed by female (Table 3-9), but insignificant effects are shown for children aged 15-17 years. The head of the household plays an important role in household decision-making process on the decision to send children to work. Therefore, the dummy of household head's education levels and employment status is included in the analysis. The results show that the incidence of child labour decreases as the head of the household's educational levels increases. These effects are significant at 1% level for all educational levels over time. Our result shows that the educational level of the head of the household significantly decreases the probability of child labour and their intensity of work in all estimates. This finding strengthens the widely known view

that parental education is the most reliable determinant of child employment decisions (Kamga, 2010).

According to Canagarajah and Coulombe (1997), the nature of parents' employment can lead to the decision of putting children in the labour market. In addition, the socioeconomic group of the household heads may have a significant effect on the decision of sending children into the labour market. The decision of mobilizing children based on the mode of organisation of the family economy is more likely when the household head is employed, compared to the situation when the household head is jobless. From our results, the effect is higher when the household head works in the informal sector as casual worker and unpaid worker. This finding was also found in Cameroon by Ndjanyou and Djienouassi (2010).

The most common factor determining the phenomenon of child labour is household's poverty. Basu and Van (1998), supporting the causality relation between poverty and child labour, focus on the living conditions of the household. They have built up a model on two strong hypotheses: luxury axiom and substitution axiom. Our focus in this chapter is the luxury axiom which assumes that parents decide to send their children to work if the family income (excludes the contribution of children) falls below the subsistence threshold. Children are therefore sent to work if the household is facing an income constraint and the income contribution of the child is necessary to make ends meet. This is shown by the negative relationship association between household income and child labour in 2005 and 2007. Children are 1.8% less likely to work (with an increasing rate) if the household income increases in 2005 (Table 3-7) and the figure is 0.7% in 2007 (Table 3-13). However, the results in Table 3-9 show that household income does not have a significant impact on the probability of working for children aged 10-14 years in 2005 but it shows significant effect on the probability of working

for children aged 15-17 years (Table 3-15). This clearly shows that the factor of sending older children to work is to supplement income to the household. Since older children are able to generate higher income compared to younger children, parents will send older children more than younger children to work.

An increase in birth order is positively associated with the probability of child labour. This finding is similar to the finding of Ilahi (2000) in Peru indicating that children are more likely to work as the sibling rank increases. In other words, first-born children may have fewer opportunities than their later-born siblings in terms of household resources. This is particularly true since workload (tasks) and resources are already divided among the older sisters and brothers, therefore, later-born children have the advantage when they grow up (Edmonds, 2005). Our results show that older children are 1.8% more likely to work than younger children in 2005 (Table 3-7). This probability is 2.0% in 2007 (Table 3-13). This may be due to the fact that older children have higher earning abilities so they are more likely to work (Emerson and Souza, 2008). An increase in the number of children in the household means a greater number of younger siblings. The significant effects are given in 2007. Household size has a negative impact on the child's working indicating that an increase in household size (in terms of more older siblings and adults) leads to less requirement of child labour. More older siblings in the household means more brothers and sisters who can provide more helping hands, and allows for a division of responsibilities at home (Webbink et al. 2010). Our results are significant at 1% level in both years. Regarding the living areas, the probability of working is higher in rural areas compared to urban areas. As noted by Ndjanyou and Djienouassi (2010), children in rural areas tend to work more compared to children in urban areas. In particular, the probability of working in rural areas is 2.3% in 2005 and 3.9% in 2007 (Table 3-7 and Table 3-13).

Children's participation in economic activity is varied between provinces. Children that reside in the province of Bali show a higher probability of working and children are found less likely to work in the province of Banten (higher reduction) in 2005. According to the report of The United Nations Children's Fund (UNICEF, 2009), more than 50% of poor children reside in Java and Bali. This has likely contributed to the high probability of working among children in Bali. In 2007, compared to Papua, children in almost all provinces are less likely to work except those children who reside in Bali, Central Sulawesi, South Sulawesi and Southeast Sulawesi who are more likely to work.

3.8.2 Estimates of Probit Model by Gender

From the above results, we noted that boys generally have higher participation rates in market work than girls. Edmonds (2007) postulated that differences in activities may reflect a fundamental difference in how girl's time allocation decisions will be made in respect to the household's economic environment (Ndjanyou and Djienouassi, 2010, p. 14). Generally, girls seem to have less time in economic activities compared to boys, whereas boys work longer hours than girls. This chapter will separately consider boys and girls in our analysis. The results confirm that boys are more likely to work compared to girls in any groups of age in 2005 and 2007 (Table 3-7 and Table 3-13). The probability of working is found higher among boys aged 15-17 years compared to boys aged 13-14 years. Biological children of the household head, especially girls have a lower probability to work compared to other girls in the household. Specifically, they are 9% less likely to work in 2005 and 2007. Biological boys of the heads of households are 4% less likely to work in both years of survey (Table 3-7 and Table 3-13).

The age of the household head significantly affects the probability of working of girls in 2005 and 2007. There is no significant effect for boys. Female headed household shows no significance at all on the probability of working for both boys and girls in 2005 and 2007. Our results show that the education level of the household head itself is negatively associated with both gender's likelihood to work, but it has a stronger impact for boys than for girls. In other words, the higher level of education of the household head, the lower is the probability for the child to work. These results confirm the theoretical proposition suggested by Baland and Robinson (2000). Similar results are observed from the effect of the head of household's employment on the probability of working for both genders. Household income significantly decreases the probability of working for both boys and girls and this shows that income is one of the major factors that motivate children to be sent to work. The results are significant in all cases. Older boys are most likely to be sent to work compared to older girls. This is confirmed by our result in Table 3-7 where older boys are 2.4% more likely to work compared to younger boys. Older girls are 1.1% more likely to work compared to younger girls. Having an additional younger sibling has significant and positive impact on girls' working in 2007.

3.8.3 Estimates of Probit Model by Region

Results in Table 3-7 and Table 3-13 show that children tend to work more and for longer hours in urban compared to rural areas. As shown above, average hours of worked per week of urban children is 43 hours against 29 hours of work per week for rural children. This may be due to the fixed working hours that have been set in urban areas. However, in rural areas, workers may be able to set their own time, particularly in farming. Therefore, the strong presence of child labour in agricultural activities explains

the difference between working hours observed in urban and rural areas. Thus, the breakdown by urban-rural in our econometric analysis would give a better understanding of the factors determining the children's time allocation in these regions.

Because the worked hours in urban areas is higher than in rural areas, children in rural areas are more likely to work, especially among children aged 15-17 years. As shown in Table 3-7, children with the age of 15-17 years in rural areas are 11.97% more likely to work than children with the age of 13-14 years and this figure increases to 13.25 in 2007 (Table 3-13). Girls in rural areas are 4.7% less likely to work compared to boys. However, in urban areas, the probability is only 0.7% less likely to work compared to boys (Table 3-7). Biological children of head of household are having more advantages in urban areas than in rural areas. The results are significant in 2005 and 2007. Age of the household head significantly decreases the probability of working in urban areas. However, no significant effects are observed in rural areas. Female headed household is positively associated with the probability of working in urban areas in 2007. In particular, children in urban areas are 3.6% more likely to work if the household is headed by female (Table 3-13). This may be due to higher cost of living in urban areas or disabled husband or breadwinner, forces female headed household to send their children to work.

Since the population in rural areas had lower educational attainment compared to the population in urban areas, there is less awareness about the importance of educating children. Therefore, children are more likely to go to work instead of attending school. This is confirmed by the results, where children are less likely to work if the household head is well-educated. The effects are much stronger for children in rural areas than in urban areas.

Employed heads of households have a significant impact on the probability of working in rural areas compared to urban areas. Children of casual workers and unpaid workers are more likely to work compared to children of self-employed in both years of survey. In addition, the results show that children of employees are less likely to work and the effects are stronger in urban areas compared to rural areas. As we can see, in all estimated models, upsurge in income reduces the probability of work. In 2005, a 1% increase in household income reduces the probability of urban children's working by 1.4%. In rural areas, children are 0.9% less likely to work by increase of household income (Table 3-7). These results show that in urban area, the probability of work is slightly more sensitive to a variation of the household income than in the rural area.

Older children in rural areas have higher probability of working compared to children in urban areas. In 2007, the probability is 2.7% in 2007, which is 0.34 percentage point higher than the probability in 2005. Number of children seems to not significantly affect the probability of working in 2005 and 2007. However, in the group's age sample, the result is found to be significant in rural areas in 2005 (Table 3-7), and in both regions in 2007 (Table 3-13). Specifically, the effects are higher for children with the age of 15-17 years, especially in rural areas. The figure is 6.4% in 2005 (Table 3-11) and 6.26% in 2007 (Table 3-17). Increases in the number of household size (in terms of number of employed adults) reduce the probability by 0.82% in rural areas in 2005, compared to 0.17% in urban areas.

3.8.4 Estimates of Probit Model by Gender in Urban and Rural Areas

Table 3-8 and 3-14 report the results of the probability of working by gender in urban and rural areas. The effects are much higher and more significant among rural male

children, with the probability of 15% in 2005, and increase to 16.4% in 2007. Similar results are also shown by household head's education, household heads who work as casual workers and unpaid workers, birth order and household income.

Female headed households significantly increase the probability of work of urban female children by 5.6%, suggesting altruism between female headed and urban female. In contrast, they are 14.1% less likely to work in 2005 if they are biological childen to the head of the household. The figure increased to 15.1% in 2007.

The results for children with the age of 10-14 years and 15-17 years, in 2005 and 2007 are given in Table (3-9) to (3-12) and Table (3-15) to (3-18). The results do not show much difference of the effects on the probability of working, compared to the effects in the pooled sample which has been discussed above. Thus, the results are not explained in details here. However, overall, the effects are much higher for children aged 15-17 years compared to children aged 10-14 years.

3.9 Poverty and Child Labour Options

The results suggests the prevalence of Luxury Axiom proposed by Basu and Van (1998), which states that a family will send the children to the labour market only if the family's income from non-child labour sources (household income that excludes the child's income) drops very low. It seems obvious that household welfare and child labour are closely correlated. In other words, if a household is too poor to survive without a child contributing to the economic activities of the household, children will be encouraged to engage in either market or homework, which may lead to harmful effects on long-run human capital accumulation which has a potential for persuading poverty

across generations (Okpukpara and Odurukwe, 2006). According to statement of ILO (1997a):

> Poverty, however, emerges as the most compelling reason why children work. Poor households need the money, and children commonly contribute around 20 to 25 percent of family income. Since by definition poor households spend the bulk of their income on food, it is clear that the income provided by working children is critical to their survival. (ILO, 1997a).

The probit estimate aims to show that as household income decreases, there is greater need for children to work to supplement household income which suggests poverty as a driving force in children's participation in economic activity. Table 3-19 shows a positive relationship between increased child participation in economic activities and household income quintiles of the household.

Table 3-19: Distribution of Child Labour Activity across Household Income Quintiles

Quintile	Child Labour	
	2005 (%)	2007 (%)
1st quintile	24.7	33.8
2nd quintile	22.2	21.3
3rd quintile	20.5	18.3
4th quintile	18.0	15.4
5th quintile	14.6	11.2

Source: Author's Calculation from SUSENAS 2005 and 2007.

About 24.7% of sampled children are from the lowest quintile engaged in work compared with only 14.6% of the children in the highest quintile, in 2005. In 2007, the proportion of working children in the lowest quintile increased to 33.8%, while only 11.2% of working children are in the highest quintile. In addition, there is a marked difference in participation in work activity by children whose households fall within the fourth and fifth quintile. This suggests that the poverty status of the household begins having a serious effect on child participation in economic activities from the fourth quintile.

Apart from household income, the income contribution of child work is undoubtedly a key factor influencing child work. According to Cockburn (2001), one of the principal factors in deciding to put children to work is presumably the amount of income that the work generates, which may enhance household welfare, especially by helping poor families to pay for transportation to school and school materials for herself or himself or other siblings. In case of child labour in Indonesia, not all child labour reported their earnings, where about 17.9% of child labour in 2005 and 28% of child labour in 2007. These children who have reported their earnings worked as self-employed and employees. This is due to the fact that they may be that hours spent in economic activities do not always translate to income. In addition, most of the time children work as unpaid workers, which are not monetarily remunerated. Table 3-20 shows details of children's earnings based on gender and gender and region in Indonesia.

Table 3-20: Child Earnings per week across Gender and Categories in Indonesia, in Indonesia Rupiah, IDR

Details	**Child Labour**	
	2005**	**2007**
Male	21,793.72	28,250.00
Female	15,724.92	26,233.83
Urban	36,334.54	57,437.63
Rural	12,685.48	20,672.48
Average	17,816.49	25,754.68

Source: Author's Calculation from SUSENAS 2005 and 2007.
Note: ** The child earnings in 2005 is inflated: the value in 2005 is multiplied by the ratio of the 2007 price index over the 2005 price index.

In terms of child earnings across gender and region, Table 3-20 shows that male and female children earn an average of IDR21,793.72and IDR15,724.92, respectively in 2005 after adjusted for infaltion. Also, IDR36,334.54and IDR12,685.48, on monthly average, was earned by children in urban and rural areas, respectively. Irrespective of their location and gender, children earn on average IDR17,816.49, per week. The earnings are almost doubled in 2007 compared to 2005. This is due the higher inflation

rate of 20.37% which was observed between 2005 and 2007. The most distinctive evidence observed from the Table 3-20 is the differential earnings of male and female children, and it is a clear indication that higher wage rates favour male children as opposed to female children. In addition, the higher earnings of children in urban areas compared to rural areas indicate that remuneration is better in urban areas compared to rural areas for children. Furthermore, this may reflect the poverty differences in urban and rural areas.

Table 3-21: Percentage of Children's Earnings Contributed to the Household Income

Categories	Child's Income to Household Income (%)	
	2005	2007
Overall	30.0	26.9
Gender		
Male	29.3	22.6
Female	31.9	29.4
Age		
10-12 years	10.3	6.8
13-14 years	19.4	15.7
15-17 years	33.3	32.6
Region		
Urban	33.4	30.2
Rural	28.1	25.5

Source: Author's Calculation from SUSENAS 2005 and 2007.

As indicated in Table 3-21, the contribution of children's earnings to household income ranges from 6% to 34%. Contributions of children aged 15-17 years to household income are relatively high compared to children aged 13-14 years and children aged 10-12 years. This is particularly true since older children are able to command higher wages, which their contribution to household income is higher than younger children. In terms of gender, because male children's income is higher, their contribution to household income is lower. This seems that female's income is more responsive to the welfare of the family compared to the males. Glick and Sahn (1997) on their study in Guinea have shown that most male children do not always give their income to their parents. In terms of region, the results show that children from urban areas earn more

income and contribute more to the household income compared to their urban counterparts. This is attributed to a higher poverty incidence in urban compared to rural areas. Because income from urban children makes a more significant contribution to household income compared to that of rural children, rural children may have a large contribution to the household, in terms of non-financial such as help on the farm which is not monetarily remunerated. Thus, many families have no alternative except sending their children to work since they see the child's earnings as an input into family survival.

3.10 Potential Endogeneity of Household Income

The main estimation issue arises from the fact that child labour contributes to household income, making the income variable endogenous. In other words, a household income assessment may be endogenous as children often contribute to the household income level through their labour (Grooteart, 1998; Nkamleu, 2009). In our estimates, we subtract the child's wage from total income; however, it may not resolve the endogeneity problem. According to Bhalotra and Heady (2003), it can be very difficult to find appropriate instruments for income and it is more difficult if the provided data is limited, such as in SUSENAS questionnaire. The similar variable is also used by Canagarajah and Coulombe (1997) and Patrinos and Psacharopolous (1995), Psacharopoulos (1997) in their analysis of child labour, which shows a significant effects on child labour. Our probit analysis also shows that household welfare has a significant impact on child labour. In particular, the effect of household income on the probability of children engaging in economic activity is negative and significant.

Therefore, consistent with the luxury axiom, an increase in household income significantly reduces child labour in both urban and rural areas.

In addition, another issue may arise, that is parental education positively correlate with household income because better educated parents have higher future income which may provide biased and inconsistent estimates. In a study of Levison (1991) in Brazil, the effect of family income was found to be small, which leads to the conclusion that it may not be a good proxy for household welfare. Thus, Levison makes an argument that parental education may be a better indicator of wealth. Therefore, Table 3-B1 to Table 3-B4 in Appendix 3-B show results of probit estimates, which heads of household's level of education is used as a proxy of household welfare (household income are excluded). However, exclusion of household income does not show a marked difference in the magnitude of all variables, the sign and significant of coefficients remained unchanged.

3.11 Conclusion

The main purpose of this chapter is to analyse the determinants of working among children using a probit model. The main objective is to examine the role of head of household in the decision-making process, and to investigate the presence of Luxury Axiom proposed by Basu and Van (1998). We define children as economically active if they reported working during the time of survey, regardless of other activities. We tested the model on the SUSENAS (The National Socioeconomic Survey, 2005 and 2007) of children with the age of 10 to 17 years within the sampled households.

A child tends to work as he or she gets older, and working children are mostly found in rural areas compared to urban areas. Furthermore, biological child of the head of the

household tend to be less engaged in the labour market. That is, the head of the household is found less likely to send his/her own child to work. These effects are much higher for boys in urban areas and for girls in rural areas. The age of the household head negatively affects the probability of working and children are more likely to work if the household is headed by a female rather than a male. This significant result is shown in urban areas in 2005; however the effect is not significant in 2007.

Household head's characteristics have a significant impact on the probability of working. Children are found to be less likely to work if the head of the household is well educated. Household heads with higher levels of educational attainment are less likely to send their children to work. We also find a positive relationship between the head of the household who are employers, casual workers and unpaid workers and the probability of working over the survey periods. The effects are significantly higher in rural areas compared to urban areas. However, the probability of working in urban areas decreases if the head of the household work as employees.

With regard to the Luxury Axiom, household income has a negative impact on work decision. This finding reflects that participation of children in economic activities is to support family in financial needs, especially in rural areas. Birth order is positively associated with the probability of working. First born children are more likely to be sent to work. According to Emerson and Souza (2008), first born children may have higher abilities which may mean that they are able to command higher wages as children in the labour market compared to their later born siblings. Tenikue and Verheyden (2008) also state that older children are the only source of additional income when constraints get tighter in poor families; they will work more compared to younger children. Thus, the earned income by older siblings can be used to cover the costs of schooling of their younger siblings. However, having more children in the household did not show any

significant effect on the probability of working in both years of survey. In contrast, the probability of working decreases by the presence of employed adults in the household. These three findings are significantly higher in rural areas compared to urban areas. Finally, the magnitude of the impact of the child's activities varies from province to province according to the geographical locations and socioeconomics characteristics of the provinces.

Evidence found in this chapter indicates that the working probability of a child decreases as household wealth increases. Moreover, as household head characteristics are highly significant in mitigating the incidence of child labour, more policy efforts should be targeted at increasing education levels of both parents and children, in making the children more valuable in society. This chapter uses simple analysis to analyse the determinants of child labour. Other factors such as trade liberalisation, bargaining power and imperfect capital market are not included in our analysis. Such analysis requires panel data, which is beyond the scope of the available data. Moreover, children in the sample are school-aged children; hence it is necessary to look at the schooling decision too. This will be done in the next chapter.

Table 3-7: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2005.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Age Groups					
10 to 12 years	-0.0582*	-0.0721*	-0.0429*	-0.0322*	-0.0743*
	(0.0015)	(0.0022)	(0.0019)	(0.0017)	(0.0021)
15 to 17 years	0.0960*	0.1159*	0.0721*	0.0544	0.1197*
	(0.0021)	(0.0031)	(0.0027)	(0.0027)	(0.0029)
Child Characteristics					
Girls	-0.0298*	-	-	-0.0065*	-0.0474*
	(0.0010)			(0.0010)	(0.0016)
Biological Child	-0.0692*	-0.0365*	-0.0925*	-0.0955*	-0.0341*
	(0.0035)	(0.0045)	(0.0050)	(0.0053)	(0.0043)
Household Head's Characteristics					
Age	-0.0003*	0.0001	-0.0005*	-0.0005*	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0155	0.0074	0.0252	0.0360**	-0.0187
	(0.0189)	(0.0259)	(0.0269)	(0.0251)	(0.0212)
Household Head's Education					
Completed Primary	-0.0337*	-0.0383*	-0.0288*	-0.0130*	-0.0452*
	(0.0019)	(0.0029)	(0.0023)	(0.0023)	(0.0028)
Junior Secondary	-0.0493*	-0.0602*	-0.0376*	-0.0244*	-0.0637*
	(0.0012)	(0.0018)	(0.0014)	(0.0015)	(0.0017)
Senior Secondary	-0.0621*	-0.0773*	-0.0461*	-0.0399*	-0.0721*
	(0.0012)	(0.0018)	(0.0015)	(0.0022)	(0.0015)
Tertiary Education	-0.0502*	-0.0706*	-0.0330*	-0.0263*	-0.0685*
	(0.0010)	(0.0013)	(0.0014)	(0.0013)	(0.0014)
Household Head's Employment					
Employer	0.0364*	0.0479*	0.0227*	0.0105*	0.0483*
	(0.0016)	(0.0025)	(0.0020)	(0.0019)	(0.0021)
Employee	-0.0113*	-0.0112*	-0.0103*	-0.0099*	-0.0060***
	(0.0018)	(0.0029)	(0.0021)	(0.0015)	(0.0033)
Casual Worker	0.0196*	0.0283*	0.0110*	0.0083*	0.0274*
	(0.0027)	(0.0042)	(0.0032)	(0.0027)	(0.0040)
Unpaid Worker	0.0585*	0.0727*	0.0436*	0.0085	0.0857*
	(0.0103)	(0.0162)	(0.0124)	(0.0092)	(0.0147)
Others	0.0174*	0.0238*	0.0105**	0.0022	0.0345*
	(0.0036)	(0.0056)	(0.0043)	(0.0027)	(0.0064)
Income (Rp.)					
Household Income	-0.0179*	-0.0187*	-0.0156*	-0.0136*	-0.0092***
	(0.0031)	(0.0048)	(0.0038)	(0.0028)	(0.0055)
Square of Household Income	0.0042**	0.0031	0.0041***	0.0042**	0.0006
	(0.0016)	(0.0024)	(0.0021)	(0.0016)	(0.0028)
Household Characteristics					
Birth Order	0.0177*	0.0242*	0.0110*	0.0087*	0.0238*
	(0.0011)	(0.0018)	(0.0014)	(0.0013)	(0.0017)
Number of Children	-0.0013	-0.0027	0.0001	-0.0008	-0.0022
	(0.0012)	(0.0019)	(0.0015)	(0.0013)	(0.0018)
Household Size	-0.0055*	-0.0078*	-0.0029*	-0.0017**	-0.0082*
	(0.0005)	(0.0008)	(0.0007)	(0.0005)	(0.0008)
Rural	0.0234*	0.0332*	0.0139*	-	-
	(0.0012)	(0.0019)	(0.0015)		
Province					
NAD	-0.0414*	-0.0437*	-0.0357*	-0.0023	-0.0058*
	(0.0015)	(0.0031)	(0.0014)	(0.0074)	(0.0022)
North Sumatera	-0.0086**	0.0030	-0.0156*	0.0173***	-0.0083
	(0.0033)	(0.0063)	(0.0031)	(0.0112)	(0.0049)

Table 3-7: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
West Sumatera	-0.0340*	-0.0295*	-0.0329*	0.0080	-0.0491*
	(0.0020)	(0.0044)	(0.0016)	(0.0098)	(0.0028)
Riau	-0.0394*	-0.0416*	-0.0340*	0.0020	-0.0562*
	(0.0017)	(0.0035)	(0.0014)	(0.0088)	(0.0024)
Jambi	-0.0337*	-0.0355*	-0.0292*	0.0117	-0.0491*
	(0.0021)	(0.0041)	(0.0020)	(0.0119)	(0.0029)
South Sumatera	-0.0355*	-0.0340*	-0.0330*	0.0085	-0.0518*
	(0.0019)	(0.0039)	(0.0015)	(0.0100)	(0.0025)
Bengkulu	-0.0371*	-0.0345*	-0.0345*	0.0084	-0.0539*
	(0.0019)	(0.0042)	(0.0014)	(0.0118)	(0.0025)
Lampung	-0.0297*	-0.0236*	-0.0308*	0.0195***	-0.0449*
	(0.0024)	(0.0050)	(0.0018)	(0.0133)	(0.0031)
Bangka Belitung	-0.0096**	0.0158***	-0.0241*	0.0324**	-0.0147**
	(0.0044)	(0.0095)	(0.0030)	(0.0166)	(0.0064)
Riau Islands	-0.0243*	-0.0173***	-0.0261*	0.0243**	-0.0422*
	(0.0039)	(0.0080)	(0.0031)	(0.0147)	(0.0056)
DKI Jakarta	-0.0158*	-0.0349*	-0.0099**	0.0277**	-
	(0.0039)	(0.0051)	(0.0043)	(0.0136)	
West Java	-0.0247*	-0.0244*	-0.0228*	0.0234**	-0.0389*
	(0.0025)	(0.0046)	(0.0025)	(0.0120)	(0.0033)
Central Java	-0.0288*	-0.0334*	-0.0232*	0.0181**	-0.0433*
	(0.0023)	(0.0038)	(0.0025)	(0.0111)	(0.0030)
DIY	-0.0372*	-0.0413*	-0.0309*	0.0117	-0.0566*
	(0.0026)	(0.0051)	(0.0023)	(0.0125)	(0.0034)
East Java	-0.0305*	-0.0265*	-0.0304*	0.0145	-0.0443*
	(0.0022)	(0.0043)	(0.0019)	(0.0104)	(0.0030)
Banten	-0.0303*	-0.0360*	-0.0245*	0.0134	-0.0444*
	(0.0025)	(0.0043)	(0.0026)	(0.0114)	(0.0036)
Bali	0.0019	-0.0011	0.0028	0.0438**	0.0021
	(0.0050)	(0.0080)	(0.0058)	(0.0188)	(0.0074)
West Nusa Tenggara	-0.0264*	-0.0206**	-0.0272*	0.0248***	-0.0411*
	(0.0028)	(0.0057)	(0.0022)	(0.0144)	(0.0037)
East Nusa Tenggara	-0.0180*	-0.0103***	-0.0210*	0.0044	-0.0251*
	(0.0029)	(0.0056)	(0.0026)	(0.0094)	(0.0041)
West Kalimantan	-0.0207*	-0.0161**	-0.0222*	0.0168***	-0.0303*
	(0.0028)	(0.0054)	(0.0025)	(0.0123)	(0.0039)
Central Kalimantan	-0.0338*	-0.0353*	-0.0296*	0.0072	-0.0489*
	(0.0020)	(0.0039)	(0.0019)	(0.0102)	(0.0028)
South Kalimantan	-0.0187*	-0.0100	-0.0227*	0.0296**	-0.0300*
	(0.0032)	(0.0062)	(0.0027)	(0.0155)	(0.0042)
East Kalimantan	-0.0325*	-0.0275*	-0.0319*	0.0165***	-0.0511*
	(0.0023)	(0.0049)	(0.0017)	(0.0118)	(0.0029)
North Sulawesi	-0.0323*	-0.0266*	-0.0316*	0.0342**	-0.0527*
	(0.0026)	(0.0056)	(0.0019)	(0.0171)	(0.0030)
Central Sulawesi	-0.0207*	-0.0021	-0.0299*	0.0184	-0.0313*
	(0.0031)	(0.0069)	(0.0020)	(0.0141)	(0.0041)
South Sulawesi	-0.0247*	-0.0064	-0.0331*	0.0208*	-0.0372*
	(0.0025)	(0.0056)	(0.0016)	(0.0124)	(0.0033)
Southeast Sulawesi	-0.0233*	-0.0108***	-0.0281*	0.0046	-0.0315*
	(0.0028)	(0.0060)	(0.0020)	(0.0095)	(0.0040)
Gorontalo	-0.0192*	-0.0011	-0.0268*	0.0234***	-0.0301*
	(0.0040)	(0.0090)	(0.0027)	(0.0160)	(0.0055)

Table 3-7: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Maluku	-0.0427*	-0.0466*	-0.0354*	-0.0091	-0.0596*
	(0.0015)	(0.0034)	(0.0013)	(0.0067)	(0.0022)
North Maluku	-0.0421*	-0.0499*	-0.0330*	-0.0081	-0.0585*
	(0.0016)	(0.0029)	(0.0016)	(0.0066)	(0.0023)
Number of Observations[1]	155,660	82,639	73,021	54,816	100,844
Pseudo R^2	0.2309	0.2471	0.2047	0.2455	0.2205
Log Likelihood	-39502.403	-23588.280	-15486.651	-9724.564	-29400.064

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-8: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2005.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Age Groups				
10 to 12 years	-0.0322*	-0.0278*	-0.0985*	-0.0507*
	(0.0024)	(0.0023)	(0.0034)	(0.0026)
15 to 17 years	0.0554*	0.0461*	0.1523*	0.0842*
	(0.0037)	(0.0036)	(0.0044)	(0.0037)
Child Characteristics				
Biological Child	-0.0380*	-0.1406*	-0.0244*	-0.0428*
	(0.0052)	(0.0085)	(0.0064)	(0.0057)
Household Head's Characteristics				
Age	-0.0003*	-0.0005*	0.0005**	-0.0003**
	(0.0001)	(0.0001)	(0.0002)	(0.0001)
Female Headed	0.0218*	0.0557**	-0.0235	-0.0143
	(0.0253)	(0.0442)	(0.0367)	(0.0223)
Household Head's Education				
Completed Primary	-0.0114*	-0.0133*	-0.0558*	-0.0348*
	(0.0030)	(0.0031)	(0.0045)	(0.0033)
Junior Secondary	-0.0235*	-0.0217*	-0.0846*	-0.0440*
	(0.0020)	(0.0020)	(0.0029)	(0.0020)
Senior Secondary	-0.0409*	-0.0337*	-0.0967*	-0.0491*
	(0.0030)	(0.0030)	(0.0025)	(0.0018)
Tertiary Education	-0.0315*	-0.0199*	-0.0957*	-0.0443*
	(0.0018)	(0.0019)	(0.0021)	(0.0019)
Household Head's Employment				
Employer	0.0158*	0.0033	0.0666*	0.0294*
	(0.0028)	(0.0023)	(0.0034)	(0.0025)
Employee	-0.0094*	-0.0092*	-0.0036	-0.0073***
	(0.0020)	(0.0021)	(0.0055)	(0.0037)
Casual Worker	0.0094**	0.0068**	0.0418*	0.0136**
	(0.0020)	(0.0036)	(0.0065)	(0.0046)
Unpaid Worker	0.0168	-0.0003	0.1067*	0.0626*
	(0.0139)	(0.0103)	(0.0234)	(0.0170)
Others	0.0063***	-0.0020	0.0411*	0.0260*
	(0.0039)	(0.0032)	(0.0098)	(0.0078)
Income (Rp.)				
Household Income	-0.0135**	-0.0117**	0.0034	-0.0128***
	(0.0038)	(0.0034)	(0.0087)	(0.0074)
Square of Household Income	0.0035	0.0037**	0.0045	0.0022
	(0.0023)	(0.0019)	(0.0041)	(0.0044)
Household Characteristics				
Birth Order	0.0101*	0.0060*	0.0335*	0.0143*
	(0.0017)	(0.0017)	(0.0028)	(0.0019)
Number of Children	-0.0007	-0.0003	-0.0046	-0.0003
	(0.0017)	(0.0018)	(0.0030)	(0.0021)
Household Size	-0.0024*	-0.0010	-0.0117*	-0.0046*
	(0.0007)	(0.0007)	(0.0014)	(0.0010)
Province				
NAD	-0.0119***	0.0272	-0.0646*	-0.0470*
	(0.0051)	(0.0273)	(0.0050)	(0.0017)
North Sumatera	0.0026	0.0527**	0.0092	-0.0185*
	(0.0093)	(0.0338)	(0.0095)	(0.0041)
West Sumatera	-0.0035	0.0414***	-0.0454*	-0.0434*
	(0.0079)	(0.0320)	(0.0068)	(0.0020)
Riau	-0.0156**	0.0733**	-0.0578*	-0.0463*
	(0.0037)	(0.0457)	(0.0059)	(0.0016)

Table 3-8: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Jambi	-0.0106	0.0951**	-0.0517*	-0.0407*
	(0.0060)	(0.0545)	(0.0064)	(0.0022)
South Sumatera	-0.0040	0.0404***	-0.0532*	-0.0435*
	(0.0078)	(0.0324)	(0.0058)	(0.0019)
Bengkulu	-0.0030	0.0402	-0.0527*	-0.0457*
	(0.0097)	(0.0364)	(0.0063)	(0.0016)
Lampung	-0.0017	0.0761**	-0.0350*	-0.0428*
	(0.0092)	(0.0465)	(0.0076)	(0.0019)
Bangka Belitung	0.0130	0.0699**	0.0265***	-0.0330*
	(0.0142)	(0.0457)	(0.0148)	(0.0037)
Riau Islands	0.0037	0.0797**	-0.0369**	-0.0385*
	(0.0112)	(0.0488)	(0.0129)	(0.0037)
DKI Jakarta	-0.0094	0.1301*	-	-
	(0.0059)	(0.0577)		
West Java	-0.0017	0.0926**	-0.0385*	-0.0344*
	(0.0081)	(0.0447)	(0.0068)	(0.0028)
Central Java	-0.0083	0.0987*	-0.0479*	-0.0352*
	(0.0063)	(0.0468)	(0.0059)	(0.0027)
DIY	-0.0080	0.0775**	-0.0655*	-0.0433*
	(0.0074)	(0.0505)	(0.0084)	(0.0023)
East Java	-0.0052	0.0683**	-0.0374*	-0.0420*
	(0.0072)	(0.0380)	(0.0066)	(0.0022)
Banten	-0.0100	0.0872**	-0.0515*	-0.0350*
	(0.0059)	(0.0488)	(0.0073)	(0.0030)
Bali	0.0100	0.1359*	-0.0037	0.0028
	(0.0131)	(0.0647)	(0.0121)	(0.0079)
West Nusa Tenggara	0.0001	0.0999**	-0.0327**	-0.0392*
	(0.0095)	(0.0543)	(0.0087)	(0.0024)
East Nusa Tenggara	0.0009	0.0173	-0.0154***	-0.0278*
	(0.0099)	(0.0232)	(0.0082)	(0.0033)
West Kalimantan	-0.0045	0.0816**	-0.0216**	-0.0317*
	(0.0078)	(0.0477)	(0.0082)	(0.0030)
Central Kalimantan	-0.0091	0.0590**	-0.0519*	-0.0405*
	(0.0064)	(0.0403)	(0.0060)	(0.0022)
South Kalimantan	0.0086	0.0832**	-0.0181***	-0.0326*
	(0.0124)	(0.0490)	(0.0090)	(0.0031)
East Kalimantan	-0.0007	0.0633**	-0.0465*	-0.0446*
	(0.0088)	(0.0403)	(0.0073)	(0.0017)
North Sulawesi	0.0113	0.0988**	-0.0510*	-0.0446*
	(0.0137)	(0.0556)	(0.0076)	(0.0018)
Central Sulawesi	0.0059	0.0601**	-0.0044	-0.0405*
	(0.0127)	(0.0436)	(0.0098)	(0.0023)
South Sulawesi	0.0061	0.0539**	-0.0115	-0.0452*
	(0.0106)	(0.0360)	(0.0080)	(0.0020)
Southeast Sulawesi	-0.0075	0.0415***	-0.0116	-0.0368*
	(0.0069)	(0.0338)	(0.0092)	(0.0026)
Gorontalo	0.0094	0.0679**	-0.0052	-0.0368*
	(0.0148)	(0.0478)	(0.0132)	(0.0032)
Maluku	-0.0111	-0.0004	-0.0702*	-0.0452*
	(0.0066)	(0.0171)	(0.0053)	(0.0017)
North Maluku	-0.0202**	0.0541**	-0.0705*	-0.0439*
	(0.0020)	(0.0409)	(0.0052)	(0.0018)

Table 3-8: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban		Rural	
	Boys	**Girls**	**Boys**	**Girls**
Number of Observations[1]	28,284	26,532	54,355	46,489
Pseudo R^2	0.2642	0.2587	0.2235	0.1946
Log Likelihood	-5209.816	-4293.088	-18282.877	-10934.975

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-9: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years, SUSENAS 2005.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Characteristics					
Girls	-0.0129*	-	-	-0.0012	-0.0209*
	(0.0009)			(0.0010)	(0.0014)
Biological Child	-0.0119*	-0.0031	-0.0213*	-0.0316*	-0.0008
	(0.0029)	(0.0037)	(0.0044)	0.0056)	(0.0034)
Household Head's Characteristics					
Age	0.0003*	0.0005*	0.00004	-0.0001	0.0006*
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0280***	0.0294*	0.0262	0.0792*	-0.0095
	(0.0213)	(0.0322)	(0.0274)	(0.0416)	(0.0176)
Household Head's Education					
Completed Primary	-0.0190*	-0.0208*	-0.0170*	-0.0049**	-0.0273*
	(0.0016)	(0.0023)	(0.0020)	(0.0022)	(0.0024)
Junior Secondary	-0.0232*	-0.0280*	-0.0179*	-0.0111*	-0.0307*
	(0.0010)	(0.0016)	(0.0013)	(0.0014)	(0.0015)
Senior Secondary	-0.0280*	-0.0339*	-0.0216*	-0.0152*	-0.0343*
	(0.0011)	(0.0016)	(0.0014)	(0.0020)	(0.0014)
Tertiary Education	-0.0236*	-0.0305*	-0.0167*	-0.0111*	-0.0316*
	(0.0010)	(0.0013)	(0.0015)	(0.0012)	(0.0016)
Household Head's Employment					
Employer	0.0209*	0.0274*	0.0136*	0.0057**	0.0286*
	(0.0015)	(0.0022)	(0.0018)	(0.0019)	(0.0020)
Employee	-0.0037**	-0.0048***	-0.0032	-0.0047**	-0.0008
	(0.0018)	(0.0027)	(0.0022)	(0.0015)	(0.0032)
Casual Worker	0.0085*	0.0104**	0.0065**	0.0020	0.0131*
	(0.0024)	(0.0036)	(0.0030)	(0.0023)	(0.0036)
Unpaid Worker	0.0572*	0.0708*	0.0421*	0.0091	0.0803*
	(0.0097)	(0.0151)	(0.0118)	(0.0106)	(0.0133)
Others	0.0082**	0.0107**	0.0054	-0.0018	0.0190*
	(0.0035)	(0.0054)	(0.0043)	(0.0024)	(0.0061)
Income (Rp.)					
Household Income	0.0035	0.0054	0.0049	-0.0059***	-0.0015
	(0.0031)	(0.0035)	(0.0047)	(0.0030)	(0.0043)
Square of Household Income	-0.0015	-0.0005	-0.0050	0.0031	0.0010
	(0.0017)	(0.0010)	(0.0033)	(0.0022)	(0.0013)
Household Characteristics					
Birth Order	0.0153*	0.0196*	0.0104*	0.0063*	0.0214*
	(0.0007)	(0.0011)	(0.0009)	(0.0008)	(0.0011)
Number of Children	-0.0046*	-0.0053*	-0.0037**	-0.0012	-0.0072*
	(0.0008)	(0.0013)	(0.0011)	(0.0009)	(0.0013)
Household Size	-0.0024*	-0.0041*	-0.0005	-0.0011**	-0.0033*
	(0.0005)	(0.0008)	(0.0007)	(0.0005)	(0.0008)
Rural	0.0140*	0.0196*	0.0083*	-	-
	(0.0011)	(0.0017)	(0.0014)		
Province					
NAD	-0.0228*	-0.0258*	-0.0191*	-0.0025	-0.0327*
	(0.0010)	(0.0017)	(0.0011)	(0.0055)	(0.0014)
North Sumatera	-0.0061*	-0.0003	-0.0097*	0.0013	-0.0049
	(0.0021)	(0.0040)	(0.0020)	(0.0067)	(0.0033)
West Sumatera	-0.0195**	-0.0189*	-0.0184*	0.0011	-0.0279*
	(0.0013)	(0.0025)	(0.0011)	(0.0068)	(0.0018)
Riau	-0.0247*	-0.0281*	-0.0206*	-0.0087***	-0.0348*
	(0.0008)	(0.0015)	(0.0009)	(0.0026)	(0.0013)

Table 3-9: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Jambi	-0.0220*	-0.0243*	-0.0188*	-0.0052	-0.0311*
	(0.0011)	(0.0019)	(0.0011)	(0.0046)	(0.0016)
South Sumatera	-0.0233*	-0.0255*	-0.0200*	-0.0003	-0.0339*
	(0.0009)	(0.0017)	(0.0010)	(0.0065)	(0.0013)
Bengkulu	-0.0233*	-0.0248*	-0.0204*	-0.0035	-0.0334*
	(0.0010)	(0.0018)	(0.0009)	(0.0060)	(0.0013)
Lampung	-0.0200*	-0.0192*	-0.0189*	0.0053	-0.0294*
	(0.0012)	(0.0025)	(0.0011)	(0.0093)	(0.0017)
Bangka Belitung	-0.0130*	-0.0056	-0.0163*	0.0039	-0.0174**
	(0.0024)	(0.0054)	(0.0017)	(0.0092)	(0.0039)
Riau Islands	-0.0178*	-0.0156**	-0.0174*	0.0092	-0.0313*
	(0.0023)	(0.0050)	(0.0018)	(0.0112)	(0.0025)
DKI Jakarta	-0.0201*	-0.0267*	-0.0160*	-0.0017	-
	(0.0017)	(0.0024)	(0.0018)	(0.0056)	
West Java	-0.0220*	-0.0239*	-0.0193*	-0.0013	-0.0310*
	(0.0011)	(0.0020)	(0.0012)	(0.0056)	(0.0016)
Central Java	-0.0226*	-0.0234*	-0.0205*	-0.0033	-0.0310*
	(0.0011)	(0.0020)	(0.0011)	(0.0049)	(0.0016)
DIY	-0.0226*	-0.0238*	-0.0198*	-0.0031	-0.0322*
	(0.0013)	(0.0029)	(0.0011)	(0.0063)	(0.0020)
East Java	-0.0219*	-0.0212*	-0.0208*	-0.0011	-0.0306*
	(0.0011)	(0.0022)	(0.0011)	(0.0057)	(0.0016)
Banten	-0.0209*	-0.0241*	-0.0173*	-0.0014	-0.0298*
	(0.0013)	(0.0021)	(0.0014)	(0.0061)	(0.0019)
Bali	-0.0036	-0.0058	-0.0026	0.0198***	-0.0061
	(0.0032)	(0.0050)	(0.0037)	(0.0151)	(0.0047)
West Nusa Tenggara	-0.0163*	-0.0139**	-0.0165*	0.0071	-0.0242*
	(0.0017)	(0.0034)	(0.0014)	(0.0099)	(0.0024)
East Nusa Tenggara	-0.0176*	-0.0162*	-0.0172*	0.0022	-0.0255*
	(0.0013)	(0.0025)	(0.0012)	(0.0080)	(0.0019)
West Kalimantan	-0.0190*	-0.0198*	-0.0172*	-0.0010	-0.0270*
	(0.0012)	(0.0023)	(0.0012)	(0.0064)	(0.0018)
Central Kalimantan	-0.0236*	-0.0259*	-0.0203*	-0.0013	-0.0343*
	(0.0009)	(0.0017)	(0.0009)	(0.0062)	(0.0013)
South Kalimantan	-0.0169*	-0.0160*	-0.0161*	0.0042	-0.0245*
	(0.0016)	(0.0030)	(0.0015)	(0.0088)	(0.0022)
East Kalimantan	-0.0219*	-0.0227*	-0.0195*	0.0033	-0.0334*
	(0.0011)	(0.0022)	(0.0010)	(0.0078)	(0.0014)
North Sulawesi	-0.0222*	-0.0238*	-0.0192*	0.0090	-0.0340*
	(0.0012)	(0.0025)	(0.0011)	(0.0113)	(0.0015)
Central Sulawesi	-0.0186*	-0.0178*	-0.0176*	0.0038	-0.0270*
	(0.0014)	(0.0028)	(0.0012)	(0.0095)	(0.0020)
South Sulawesi	-0.0178*	-0.0119**	-0.0201*	0.0081	-0.0264*
	(0.0013)	(0.0029)	(0.0010)	(0.0095)	(0.0018)
Southeast Sulawesi	-0.0151*	-0.0135**	-0.0152*	0.0064	-0.0221*
	(0.0016)	(0.0031)	(0.0015)	(0.0098)	(0.0023)
Gorontalo	-0.0166*	-0.0137**	-0.0167*	0.0020	-0.0236*
	(0.0021)	(0.0044)	(0.0016)	(0.0089)	(0.0030)
Maluku	-0.0246*	-0.0263*	-0.0214*	-0.0058	-0.0351*
	(0.0008)	(0.0017)	(0.0008)	(0.0048)	(0.0012)
North Maluku	-0.0250*	-0.0283*	-0.0207*	-0.0064	-0.0356*
	(0.0008)	(0.0014)	(0.0008)	(0.0043)	(0.0011)

Table 3-9: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Number of Observations[1]	102,817	53,660	49,157	35,077	35,077
Pseudo R^2	0.1123	0.1212	0.0971	0.0874	0.0874
Log Likelihood	-15026.235	-9029.692	-5902.684	-2726.196	-2726.196

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-10: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years by Region and Gender, SUSENAS 2005.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Child Characteristics				
Biological Child	-0.0099**	-0.0570*	0.0022	-0.0041
	(0.0051)	(0.0097)	(0.0052)	(0.0044)
Household Head's Characteristics				
Age	-0.00001	-0.0001	0.0009	0.0002**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0664**	0.1068**	0.0045	-0.0185
	(0.0564)	(0.0662)	(0.0381)	(0.0089)
Household Head's Education				
Completed Primary	-0.0061**	-0.0033	-0.0316*	-0.0232*
	(0.0027)	(0.0033)	(0.0038)	(0.0030)
Junior Secondary	-0.0126*	-0.0079**	-0.0393*	-0.0222*
	(0.0017)	(0.0023)	(0.0025)	(0.0018)
Senior Secondary	-0.0185*	-0.0104**	-0.0437*	-0.0251*
	(0.0026)	(0.0029)	(0.0023)	(0.0016)
Tertiary Education	-0.0132*	-0.0080**	-0.0434*	-0.0203*
	(0.0014)	(0.0022)	(0.0023)	(0.0024)
Household Head's Employment				
Employer	0.0104*	0.0002	0.0378*	0.0192*
	(0.0029)	(0.0021)	(0.0031)	(0.0024)
Employee	-0.0048**	-0.0050**	-0.0011	-0.0006
	(0.0020)	(0.0020)	(0.0050)	(0.0039)
Casual Worker	0.0037	0.0003	0.0156**	0.0109*
	(0.0034)	(0.0029)	(0.0057)	(0.0045)
Unpaid Worker	0.0046	0.0125	0.1030*	0.0577*
	(0.0120)	(0.0163)	(0.0212)	(0.0158)
Others	0.0009	-0.0042	0.0212**	0.0154**
	(0.0038)	(0.0026)	(0.0094)	(0.0075)
Income (Rp.)				
Household Income	-0.0066***	0.0062	-0.0026	0.0021
	(0.0034)	(0.0043)	(0.0071)	(0.0075)
Square of Household Income	0.0019	-0.0055	0.0033	-0.0032
	(0.0021)	(0.0034)	(0.0025)	(0.0047)
Household Characteristics				
Birth Order	0.0064*	0.0056*	0.0293*	0.0134*
	(0.0011)	(0.0011)	(0.0018)	(0.0013)-
Number of Children	-0.0010	-0.0013	-0.0088*	0.0055*
	(0.0012)	(0.0013)	(0.0020)	(0.0015)
Household Size	-0.0015**	-0.0006	-0.0060	-0.0006
	(0.0007)	(0.0008)	(0.0012)	(0.0010)
Province				
NAD	-0.0044	-0.0006	-0.0399*	-0.0251*
	(0.0061)	(0.0090)	(0.0026)	(0.0015)
North Sumatera	0.0022	-0.0004	0.0031	-0.0097**
	(0.0096)	(0.0083)	(0.0064)	(0.0030)
West Sumatera	-0.0009	0.0035	-0.0286	-0.0243*
	(0.0081)	(0.0109)	(0.0040)	(0.0015)
Riau	-0.0021	-0.0043	-0.0420*	-0.0267*
	(0.0072)	(0.0065)	(0.0025)	(0.0012)
Jambi	-0.0094	0.0013	-0.0360*	-0.0248*
	(0.0026)	(0.0109)	(0.0032)	(0.0014)
South Sumatera	-0.0021	0.0012	-0.0399*	-0.0265*
	(0.0076)	(0.0100)	(0.0026)	(0.0013)
Bengkulu	-0.0022	-0.0057	-0.0385*	-0.0266*
	(0.0087)	(0.0067)	(0.0028)	(0.0012)

Table 3-10: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Lampung	0.0013	0.0080	-0.0297*	-0.0256*
	(0.0102)	(0.0146)	(0.0039)	(0.0013)
Bangka Belitung	0.0097	-0.0043	-0.0088	-0.0197*
	(0.0159)	(0.0072)	(0.0087)	(0.0027)
Riau Islands	0.0129	0.0042	-0.0381**	-0.0239**
	(0.0175)	(0.0126)	(0.0051)	(0.0022)
DKI Jakarta	-0.0075	0.0046	-	-
	(0.0041)	(0.0114)		
West Java	-0.0032	0.0006	-0.0365*	-0.0244*
	(0.0067)	(0.0087)	(0.0030)	(0.0015)
Central Java	-0.0061	0.0005	-0.0334*	-0.0262*
	(0.0052)	(0.0088)	(0.0032)	(0.0014)
DIY	-0.0053	-0.0010	-0.0356*	-0.0259*
	(0.0063)	(0.0105)	(0.0051)-	(0.0013)
East Java	-0.0027	0.0005	0.0315*	-0.0267*
	(0.0069)	(0.0088)	(0.0034)	(0.0014)
Banten	-0.0063	0.0042	-0.0358*	-0.0230*
	(0.0050)	(0.0119)	(0.0036)	(0.0018)
Bali	0.0125	0.0279***	-0.0116	-0.0031
	(0.0169)	(0.0258)	(0.0075)	(0.0053)
West Nusa Tenggara	0.0032	0.0107	-0.0217**	-0.0224*
	(0.0112)	(0.0162)	(0.0054)	(0.0017)
East Nusa Tenggara	0.0069	-0.0035	-0.0256*	-0.0225*
	(0.0140)	(0.0070)	(0.0038)	(0.0016)
West Kalimantan	-0.0051	0.0042	-0.0295*	-0.0227*
	(0.0057)	(0.0122)	(0.0037)	(0.0016)
Central Kalimantan	0.0010	-0.0053	-0.0413*	-0.0265*
	(0.0097)	(0.0058)	(0.0025)	(0.0013)
South Kalimantan	0.0038	0.0027	-0.0252*	-0.0213*
	(0.0116)	(0.0114)	(0.0046)	(0.0019)
East Kalimantan	-0.0001	0.0068	-0.0369*	-0.0271*
	(0.0086)	(0.0131)	(0.0033)	(0.0011)
North Sulawesi	0.0096	0.0077	-0.0412*	-0.0259*
	(0.0158)	(0.0153)	(0.0031)	(0.0013)
Central Sulawesi	0.0035	0.0044	-0.0279*	-0.0232*
	(0.0129)	(0.0134)	(0.0043)	(0.0016)
South Sulawesi	0.0106	0.0027	-0.0204*	-0.0269*
	(0.0144)	(0.0104)	(0.0043)	(0.0014)
Southeast Sulawesi	0.0014	0.0103	-0.0208*	-0.0204*
	(0.0104)	(0.0161)	(0.0048)	(0.0019)
Gorontalo	0.0092	-0.0058	-0.0232**	-0.0210*
	(0.0167)	(0.0067)	(0.0065)	(0.0023)
Maluku	-0.0036	-0.0078	-0.0406*	-0.0277*
	(0.0083)	(0.0044)	(0.0027)	(0.0011)
North Maluku	-0.0058	-0.0069	-0.0439*	-0.0267*
	(0.0058)	(0.0054)	(0.0023)	(0.0011)
Number of Observations[1]	18,048	17,029	35,612	32,128
Pseudo R^2	0.1059	0.0949	0.0967	0.0988
Log Likelihood	-1427.576	-1251.442	-7548.475	-4560.378

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-11: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years, SUSENAS 2005.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Characteristics					
Girls	-0.0898*	-	-	-0.0293*	-0.1309*
	(0.0035)			(0.0044)	(0.0048)
Biological Child	-0.2189*	-0.1196*	-0.2791*	-0.2900*	-0.1210*
	(0.0092)	(0.0127)	(0.0125)	(0.0128)	(0.0123)
Household Head's Characteristics					
Age	-0.0008**	-0.0001	-0.0013*	-0.0016*	0.00003
	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Female Headed	0.0012	-0.0230	0.0445	0.0234	-0.0449
	(0.0543)	(0.0691)	(0.0830)	(0.0646)	(0.0717)
Household Head's Education					
Completed Primary	-0.0830*	-0.0893*	-0.0739*	-0.0542*	-0.0948*
	(0.0066)	(0.0095)	(0.0086)	(0.0106)	(0.0085)
Junior Secondary	-0.1595*	-0.1844*	-0.1262*	-0.1037*	-0.1887*
	(0.0045)	(0.0069)	(0.0055)	(0.0066)	(0.0065)
Senior Secondary	-0.2047*	-0.2440*	-0.1559*	-0.1626*	-0.2245*
	(0.0042)	(0.0060)	(0.0055)	(0.0081)	(0.0055)
Tertiary Education	-0.1765*	-0.2496*	-0.1159*	-0.1190*	-0.2333*
	(0.0039)	(0.0041)	(0.0055)	(0.0053)	(0.0053)
Household Head's Employment					
Employer	0.0900*	0.1101*	0.0595*	0.0358*	0.1089*
	(0.0049)	(0.0070)	(0.0064)	(0.0074)	(0.0062)
Employee	-0.0302*	-0.0242**	-0.0297*	-0.0335*	-0.0141
	(0.0061)	(0.0091)	(0.0074)	(0.0064)	(0.0102)
Casual Worker	00.0560*	0.0787*	0.0313**	0.0368*	0.00680*
	(0.0083)	(0.0120)	(0.0108)	(0.0110)	(0.0113)
Unpaid Worker	0.0426***	0.0449	0.0433	0.0262	0.0526***
	(0.0246)	(0.0351)	(0.0338)	(0.0353)	(0.0321)
Others	0.0414*	0.0558*	0.0255***	0.0114	0.0714*
	(0.0106)	(0.0153)	(0.0137)	(0.0113)	(0.0164)
Income (Rp.)					
Household Income	-0.0571*	-0.0501**	-0.0551*	-0.0497*	-0.0366**
	(0.0104)	(0.0152)	(0.0122)	(0.0116)	(0.0176)\
Square of Household Income	0.0122**	0.0083	0.0113***	-0.0138**	0.0011
	(0.0054)	(0.0078)	(0.0062)	(0.0065)	(0.0093)
Household Characteristics					
Birth Order	0.0929*	0.1090*	0.0714	0.0555*	0.1136*
	(0.0059)	(0.0088)	(0.0075)	(0.0073)	(0.0082)
Number of Children	-0.0507*	-0.0589*	-0.0393*	-0.0277*	-0.0639*
	(0.0060)	(0.0089)	(0.0076)	(0.0074)	(0.0084)
Household Size	-0.0135*	-0.0169*	-0.0089*	-0.0044**	-0.0194*
	(0.0018)	(0.0026)	(0.0023)	(0.0021)	(0.0025)
Rural	0.0581*	0.0778*	0.0368*	-	-
	(0.0041)	(0.0060)	(0.0052)		
Province					
NAD	-0.0999*	-0.0732*	-0.1088*	-0.0028	-0.1337*
	(0.0101)	(0.0189)	(0.0080)	(0.0319)	(0.0131)
North Sumatera	0.0103	0.0427***	-0.0200	0.0848**	0.0032
	(0.0143)	(0.0227)	(0.0155)	(0.0417)	(0.0181)
West Sumatera	-0.0686*	-0.0135	-0.0900*	0.0371	-0.1023*
	(0.0121)	(0.0217)	(0.0102)	(0.0379)	(0.0153)

Table 3-11: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Riau	-0.0700*	-0.0488**	-0.0819*	0.0446	-0.1046*
	(0.0128)	(0.0218)	(0.0119)	(0.0417)	(0.0160)
Jambi	-0.0421**	-0.0262	-0.0513**	0.0827***	-0.0725*
	(0.0146)	(0.0238)	(0.0152)	(0.0502)	(0.0178)
South Sumatera	-0.0452**	-0.0078	-0.0741*	0.0480	-0.0706*
	(0.0132)	(0.0225)	(0.0120)	(0.0399)	(0.0167)
Bengkulu	-0.0588*	-0.0153	-0.0886*	0.0562	-0.0922*
	(0.0137)	(0.0245)	(0.0111)	(0.0489)	(0.0166)
Lampung	-0.0293***	0.0157	-0.0681*	0.0753***	-0.0576**
	(0.0149)	(0.0253)	(0.0132)	(0.0464)	(0.0183)
Bangka Belitung	0.0607**	0.1453*	-0.0282	0.1446**	0.0564**
	(0.0215)	(0.0336)	(0.0205)	(0.0560)	(0.0276)
Riau Islands	-0.0082	0.0275	-0.0397	0.0868**	-0.0291
	(0.0216)	(0.0349)	(0.0222)	(0.0489)	-
DKI Jakarta	0.0514**	-0.0204	0.0586**	0.1377*	
	(0.0204)	(0.0283)	(0.0245)	(0.0485)	(0.0335)
West Java	0.0166	0.0314	0.0018	0.1252**	-0.0093
	(0.0148)	(0.0226)	(0.0172)	(0.0451)	(0.0188)
Central Java	-0.0061	-0.0201	0.0058	0.1074**	-0.0360**
	(0.0137)	(0.0201)	(0.0170)	(0.0436)	(0.0169)
DIY	-0.0679**	-0.0711**	-0.0612**	0.0716	-0.1288*
	(0.0195)	(0.0312)	(0.0206)	(0.0507)	(0.0245)
East Java	-0.0236***	0.0040	-0.0481**	0.0822**	-0.0491**
	(0.0131)	(0.0211)	(0.0134)	(0.0408)	(0.0163)
Banten	-0.0278*	-0.0359	-0.0253	0.0777**	-0.0542**
	(0.0162)	(0.0247)	(0.0183)	(0.0450)	(0.0216)
Bali	0.0653**	0.0634**	0.0580**	0.1271**	0.0792**
	(0.0211)	(0.0312)	(0.0260)	(0.0533)	(0.0279)
West Nusa Tenggara	-0.0342**	-0.0045	-0.0546**	0.0933**	-0.0704**
	(0.0154)	(0.0253)	(0.0156)	(0.0484)	(0.0192)
East Nusa Tenggara	0.0295***	0.0656**	-0.0030	0.0195	0.0375***
	(0.0162)	(0.0253)	(0.0180)	(0.0371)	(0.0202)
West Kalimantan	0.0304***	0.0634**	-0.0056	0.0877**	0.0271
	(0.0168)	(0.0263)	(0.0181)	(0.0469)	(0.0209)
Central Kalimantan	-0.0278***	-0.0100	-0.0420**	0.0478	-0.0468**
	(0.0144)	(0.0231)	(0.0154)	(0.0427)	(0.0180)
South Kalimantan	0.0220	0.0662**	-0.0220	0.1263**	0.0021
	(0.0174)	(0.0273)	(0.0183)	(0.0527)	(0.0212)
East Kalimantan	-0.0349**	0.0134	-0.0721*	0.0723***	-0.0699**
	(0.0150)	(0.0257)	(0.0132)	(0.0432)	(0.0195)
North Sulawesi	-0.0305***	0.0218	-0.0684**	0.1337**	-0.0803**
	(0.0127)	(0.0292)	(0.0158)	(0.0554)	(0.0207)
Central Sulawesi	0.0256	0.1223*	-0.0729*	0.0786***	0.0147
	(0.0180)	(0.0293)	(0.0141)	(0.0511)	(0.0217)
South Sulawesi	-0.0160	0.0561**	-0.0772*	0.0709***	-0.0351**
	(0.0134)	(0.0230)	(0.0109)	(0.0416)	(0.0166)
Southeast Sulawesi	-0.0235	0.0441***	-0.0743*	0.0103	-0.0248
	(0.0147)	(0.0260)	(0.0121)	(0.0355)	(0.0193)
Gorontalo	0.0182	0.0960**	-0.0481**	0.1083**	-0.0027
	(0.0223)	(0.0368)	(0.0203)	(0.0585)	(0.0275)
Maluku	-0.1004*	-0.0972*	-0.0905*	-0.0323	-0.1277*
	(0.0125)	(0.0221)	(0.0119)	(0.0325)	(0.0166)
North Maluku	-0.0872*	-0.1016*	-0.0695*	-0.0166	-0.1114*
	(0.0136)	(0.0214)	(0.0150)	(0.0349)	(0.0181)

Table 3-11: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Number of Observations[1]	52,843	28,979	23,864	19,739	33,104
Pseudo R^2	0.1230	0.1275	0.1169	0.1383	0.1022
Log Likelihood	-24728.542	-14790.087	-9576.591	-7044.700	-17429.497

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-12: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years by Region and Gender, SUSENAS 2005.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Child Characteristics				
Biological Child	-0.1480*	-0.3665*	-0.0782*	-0.1613*
	(0.0170)	(0.0173)	(0.0167)	(0.0174)
Household Head's Characteristics				
Age	-0.0014**	-0.0016*	0.0008***	-0.0008**
	(0.0004)	(0.0004)	(0.0005)	(0.0004)
Female Headed	0.0270	0.0268	-0.0851	0.0126
	(0.0792)	(0.0937)	(0.0941)	(0.1119)
Household Head's Education				
Completed Primary	-0.0430**	-0.0612*	-0.1067*	-0.0767*
	(0.0143)	(0.0138)	(0.0122)	(0.0113)
Junior Secondary	-0.1007*	-0.0950*	-0.2266*	-0.1396*
	(0.0094)	(0.0081)	(0.0099)	(0.0078)
Senior Secondary	-0.1660*	-0.1440*	-0.2769*	-0.1593*
	(0.0106)	(0.0113)	(0.0084)	(0.0068)
Tertiary Education	-0.1534*	-0.0904*	-0.2988*	-0.1589*
	(0.0054)	(0.0081)	(0.0077)	(0.0065)
Household Head's Employment				
Employer	0.0513*	0.0171***	0.1345*	0.0714*
	(0.0107)	(0.0095)	(0.0087)	(0.0081)
Employee	-0.0355*	-0.0275**	-0.0001	-0.0244***
	(0.0089)	(0.0084)	(0.0149)	(0.0125)
Casual Worker	0.0398**	0.0360**	0.0995*	0.0273**
	(0.0149)	(0.0156)	(0.0159)	(0.0144)
Unpaid Worker	0.0680	-0.0213	0.0375	0.0647
	(0.0542)	(0.0360)	(0.0440)	(0.0452)
Others	0.0247	-0.0003	0.0796*	0.0604**
	(0.0164)	(0.0140)	(0.0221)	(0.0231)
Income (Rp.)				
Household Income	-0.0507**	-0.0420**	0.0108	-0.0544**
	(0.0177)	(0.0120)	(0.0247)	(0.0238)
Square of Household Income	0.0125	0.0101***	0.0086	-0.0074
	(0.0105)	(0.0058)	(0.0124)	(0.0138)
Household Characteristics				
Birth Order	0.0624*	0.0440*	0.1309*	0.0860*
	(0.0104)	(0.0098)	(0.0118)	(0.0105)
Number of Children	-0.0259**	-0.0259**	-0.0760*	-0.0457*
	(0.0105)	(0.0099)	(0.0122)	(0.0107)
Household Size	-0.0075**	-0.0013	-0.0219*	-0.0151*
	(0.0030)	(0.0028)	(0.0036)	(0.0033)
Province				
NAD	-0.0476	0.1226	-0.0866**	-0.1446*
	(0.0278)	(0.1107)	(0.0250)	(0.0092)
North Sumatera	0.0224	0.2377**	0.0458***	-0.0360***
	(0.0403)	(0.1255)	(0.0277)	(0.0191)
West Sumatera	-0.0051	0.1634***	-0.0521***	-0.1231*
	(0.0376)	(0.1181)	(0.0274)	(0.0118)
Riau	-0.0570***	0.3340**	-0.0411	-0.1324*
	(0.0261)	(0.1500)	(0.0294)	(0.0110)
Jambi	-0.0188	0.3708**	-0.0333	-0.0945*
	(0.0395)	(0.1545)	(0.0298)	(0.0157)
South Sumatera	-0.0023	0.1749***	-0.0173	-0.1026*
	(0.0380)	(0.1230)	(0.0281)	(0.0142)
Bengkulu	0.0034	0.2168**	-0.0244	-0.1274*
	(0.0490)	(0.1430)	(0.0299)	(0.0115)

Table 3-12: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years, SUSENAS 2005 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Lampung	-0.0039	0.2728**	0.0202	-0.1106*
	(0.0414)	(0.1423)	(0.0311)	(0.0137)
Bangka Belitung	0.0632	0.3247**	0.1822*	-0.0660**
	(0.0552)	(0.1510)	(0.0406)	(0.0235)
Riau Islands	0.0038	0.3039**	0.0436	-0.0847**
	(0.0430)	(0.1488)	(0.0539)	(0.0294)
DKI Jakarta	-0.0222	0.4454*	-	-
	(0.0329)	(0.1409)		
West Java	0.0166	0.3804*	0.0392	-0.0432**
	(0.0389)	(0.1360)	(0.0288)	(0.0196)
Central Java	-0.0152	0.3924*	-0.0284	-0.0390***
	(0.0335)	(0.1370)	(0.0256)	(0.0189)
DIY	-0.0177	0.3082**	-0.1232**	-0.1139**
	(0.0419)	(0.1543)	(0.0431)	(0.0216)
East Java	-0.0076	0.2986**	0.0096	-0.0911*
	(0.0349)	(0.1311)	(0.0268)	(0.0146)
Banten	-0.0297	0.3406**	-0.0407	-0.0626**
	(0.0332)	(0.1455)	(0.0341)	90.0219)
Bali	0.0271	0.3631**	0.0772**	0.0647**
	(0.0483)	(0.1505)	(0.0394)	(0.0343)
West Nusa Tenggara	0.0023	0.3414**	-0.0155	-0.1020*
	(0.0408)	(0.1497)	(0.0326)	(0.0160)
East Nusa Tenggara	0.0019	0.1069	0.0813**	-0.0090
	(0.0415)	(0.1081)	(0.0298)	(0.0222)
West Kalimantan	0.0021	0.3116**	0.0852**	-0.0311
	(0.0410)	(0.1448)	(0.0317)	(0.0211)
Central Kalimantan	-0.0466	0.3011**	0.0011	-0.0797*
	(0.0303)	(0.1463)	(0.0292)	(0.0168)
South Kalimantan	0.0475	0.3285**	0.0687**	-0.0567**
	(0.0511)	(0.1490)	(0.0323)	(0.0206)
East Kalimantan	0.0111	0.2302**	0.0035	-0.1139*
	(0.0407)	(0.1326)	(0.0337)	(0.0147)
North Sulawesi	0.0503	0.3529**	-0.0039	-0.1226*
	(0.0529)	(0.1534)	(0.0363)	(0.0148)
Central Sulawesi	0.0361	0.2385**	0.1428*	-0.1106*
	(0.0543)	(0.1467)	(0.0332)	(0.0149)
South Sulawesi	0.0132	0.2195**	0.0671**	-0.1153*
	(0.0400)	(0.1274)	(0.0275)	(0.0122)
Southeast Sulawesi	-0.0301	0.1445	0.0711**	-0.0977*
	(0.0342)	(0.1178)	(0.0319)	(0.0149)
Gorontalo	0.0267	0.3309**	0.1132**	-0.0929**
	(0.0558)	(0.1596)	(0.0443)	(0.0210)
Maluku	-0.0511	0.0397	-0.1223*	-0.1149*
	(0.0334)	(0.1002)	(0.0294)	(0.0143)
North Maluku	-0.1093**	0.2739**	-0.0942**	-0.1084*
	(0.0097)	(0.1492)	(0.0313)	(0.0159)
Number of Observations[1]	10,236	9,503	18,743	14,361
Pseudo R^2	0.1471	0.1800	0.0862	0.0972
Log Likelihood	-3820.325	-3017.939	-10902.424	-6389.873

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-13: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2007.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Age Groups					
10 to 12 years	-0.0739*	-0.0922*	-0.0520*	-0.0387*	-0.0961*
	(0.0017)	(0.0026)	(0.0023)	(0.0021)	(0.0025)
15 to 17 years	0.1052*	0.1225*	0.0811*	0.0567*	0.1325*
	(0.0023)	(0.0033)	(0.0030)	(0.0028)	(0.0032)
Child Characteristics					
Girls	-0.0405*	-	-	-0.0038*	-0.0675*
	(0.0013)			(0.0015)	(0.0019)
Biological Child	-0.0685*	-0.0357*	-0.0885*	-0.1041*	-0.0322*
	(0.0034)	(0.0046)	(0.0046)	(0.0051)	(0.0043)
Household Head's Characteristics					
Age	-0.0003*	0.0001	-0.0006*	-0.0007*	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.0181	-0.0240	-0.0163	-0.0150	-0.0112
	(0.0218)	(0.0312)	(0.0269)	(0.0197)	(0.0363)
Household Head's Education					
Completed Primary	-0.0398*	-0.0446*	-0.0338*	-0.0231*	-0.0482*
	(0.0026)	(0.0038)	(0.0033)	(0.0034)	(0.0037)
Junior Secondary	-0.0570*	-0.0648*	-0.0423*	-0.0333*	-0.0707*
	(0.0018)	(0.0028)	(0.0024)	(0.0023)	(0.0028)
Senior Secondary	-0.0744*	-0.0905*	-0.0542*	-0.0517*	-0.0854*
	(0.0018)	(0.0027)	(0.0024)	(0.0030)	(0.0026)
Tertiary Education	-0.0626*	-0.0871*	-0.0404*	-0.0377*	-0.0842*
	(0.0018)	(0.0024)	(0.0025)	(0.0020)	(0.0030)
Household Head's Employment					
Employer	0.0549*	0.0576*	0.0411*	0.0368*	0.0501*
	(0.0026)	(0.0036)	(0.0030)	(0.0034)	(0.0033)
Employee	0.0031	0.0075**	-0.0019	-0.0016	0.0112**
	(0.0022)	(0.0034)	(0.0027)	(0.0020)	(0.0036)
Casual Worker	0.0324*	0.0468*	0.0164**	0.0094	0.0467*
	(0.0072)	(0.0113)	(0.0086)	(0.0066)	(0.0112)
Unpaid Worker	0.0659*	0.0605*	0.0606*	0.0437*	0.0594*
	(0.0093)	(0.0128)	(0.0124)	(0.0144)	(0.0594)
Others	0.0247*	0.0189**	0.0251*	0.0061	0.0330*
	(0.0051)	(0.0073)	(0.0066)	(0.0043)	(0.0083)
Income (Rp.)					
Household Income	-0.0105*	-0.0256*	-0.0025***	-0.0026**	-0.0324*
	(0.0015)	(0.0021)	(0.0013)	(0.0008)	(0.0023)
Square of Household Income	0.0004**	0.0009*	0.0002**	0.0001**	0.0019*
	(0.0001)	(0.0002)	(0.0001)	(0.00004)	(0.0002)
Household Characteristics					
Birth Order	0.0199*	0.0270*	0.0117*	0.0092*	0.0272*
	(0.0013)	(0.0021)	(0.0016)	(0.0016)	(0.0019)
Number of Children	0.0009	-0.0031	0.0036**	0.0036**	-0.0034
	(0.0014)	(0.0022)	(0.0017)	(0.0016)	(0.0021)
Household Size	-0.0074	-0.0072*	-0.0058*	-0.0044*	-0.0080*
	(0.0007)	(0.0011)	(0.0009)	(0.0007)	(0.0010)
Rural	0.0389*	0.0532*	0.0225*	-	-
	(0.0015)	(0.0023)	(0.0020)		
Province					
NAD	-0.0641*	-0.0663*	-0.0554*	-0.0213**	-0.0901*
	(0.0020)	(0.0039)	(0.0017)	(0.0051)	(0.0028)
North Sumatera	0.0195*	0.0308*	0.0092	0.0168***	0.0360*
	(0.0054)	(0.0088)	(0.0059)	(0.0107)	(0.0077)

Table 3-13: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
West Sumatera	-0.0441*	-0.0371*	-0.0436*	0.0085	-0.0674*
	(0.0031)	(0.0060)	(0.0027)	(0.0102)	(0.0040)
Riau	-0.0479*	-0.0352*	-0.0500*	0.0033	-0.0708*
	(0.0031)	(0.0065)	(0.0022)	(0.0101)	(0.0041)
Jambi	-0.0501*	-0.0417*	-0.0499*	0.0211***	-0.0779*
	(0.0029)	(0.0061)-	(0.0022)	(0.0135)	(0.0036)
South Sumatera	-0.0362*	0.0279*	-0.0383*	0.0101	-0.0564*
	(0.0035)	(0.0066)	(0.0031)	(0.0108)	(0.0046)
Bengkulu	-0.0462*	-0.0382*	-0.0468*	0.0118	-0.0708*
	(0.0032)	(0.0064)	(0.0025)	(0.0124)	(0.0040)
Lampung	-0.0112**	0.0129	-0.0310*	0.0252**	-0.0254*
	(0.0050)	(0.0093)	(0.0041)	(0.0139)	(0.0064)
Bangka Belitung	0.0180**	0.0654*	-0.0154**	0.0351**	0.0294**
	(0.0079)	(0.0149)	(0.0067)	(0.0163)	(0.0119)
Riau Islands	-0.0427*	-0.0345**	-0.0426*	-0.0019	-0.0629*
	(0.0046)	(0.0089)	(0.0039)	(0.0092)	(0.0076)
DKI Jakarta	-0.0143**	-0.0440*	-0.0091	0.0159***	-
	(0.0059)	(0.0080)	(0.0062)	(0.0109)	
West Java	-0.0504*	-0.0620*	-0.0378*	0.0022	-0.0820*
	(0.0027)	(0.0042)	(0.0031)	(0.0085)	(0.0032)
Central Java	-0.0453*	-0.0498*	-0.0377*	0.0050	-0.0717*
	(0.0029)	(0.0048)	(0.0031)	(0.0089)	(0.0036)
DIY	-0.0098	-0.0146	-0.0049	0.0263***	-0.0212***
	(0.0082)	(0.0122)	(0.0099)	(0.0171)	(0.0117)
East Java	-0.0412*	-0.0392*	-0.0395*	0.0012	-0.0611*
	(0.0031)	(0.0054)	(0.0030)	(0.0084)	(0.0041)
Banten	-0.0583*	-0.0716*	-0.0435*	-0.0053	-0.0897*
	(0.0026)	(0.0040)	(0.0030)	(0.0082)	(0.0030)
Bali	0.0758*	0.0600*	0.0878*	0.0939*	0.0935*
	(0.0100)	(0.0138)	(0.0136)	(0.0233)	(0.0140)
West Nusa Tenggara	-0.0111***	-0.0135	-0.0078	0.0228**	-0.0211**
	(0.0054)	(0.0085)	(0.0063)	(0.0134)	(0.0075)
East Nusa Tenggara	-0.0158**	-0.0087	-0.0202*	-0.0102	-0.0213**
	(0.0042)	(0.0073)	(0.0043)	(0.0075)	(0.0058)
West Kalimantan	-0.0272*	-0.0185**	-0.0304*	0.0053	-0.0394*
	(0.0039)	(0.0071)	(0.0037)	(0.0105)	(0.0054)
Central Kalimantan	-0.0176*	-0.0011	-0.0276*	0.0366**	-0.0340*
	(0.0045)	(0.0083)	(0.0041)	(0.0156)	(0.0058)
South Kalimantan	-0.0187*	-0.0142***	-0.0202*	0.0210***	-0.0317*
	(0.0046)	(0.0077)	(0.0049)	(0.0131)	(0.0061)
East Kalimantan	-0.0580*	-0.0559*	-0.0523*	-0.0167**	-0.0812*
	(0.0025)	(0.0051)	(0.0020)	(0.0059)	(0.0036)
North Sulawesi	-0.0357*	-0.0097	-0.0492*	0.0153	-0.0576*
	(0.0040)	(0.0086)	(0.0025)	(0.0128)	(0.0051)
Central Sulawesi	0.0066	0.0576*	-0.0311*	0.0410**	-0.0023
	(0.0060)	(0.0120)	(0.0042)	(0.0183)	(0.0076)
South Sulawesi	0.0023	0.0467*	-0.0306*	0.0222***	0.0002
	(0.0049)	(0.0097)	(0.0036)	(0.0123)	(0.0066)
Southeast Sulawesi	0.0348*	0.0858*	-0.0086	0.0232***	0.0425*
	(0.0069)	(0.0126)	(0.0059)	(0.0142)	(0.0091)
Gorontalo	-0.0128**	0.0171	-0.0316*	-0.0044	-0.0179**
	(0.0056)	(0.0111)	(0.0045)	(0.0101)	(0.0078)
West Sulawesi	-0.0121***	0.0215**	-0.0350*	-0.0087	-0.0160***
	(0.0059)	(0.0115)	(0.0045)	(0.0097)	(0.0081)

Table 3-13: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Maluku	-0.0359*	-0.0335*	-0.0335*	0.0072	-0.0515*
	(0.0042)	(0.0074)	(0.0041)	(0.0091)	(0.0057)
North Maluku	-0.0266*	-0.0155	-0.0308*	0.0399**	-0.0463*
	(0.0049)	(0.0090)	(0.0046)	(0.0188)	(0.0062)
West Papua	-0.0417*	-0.0442*	-0.0354*	-0.0223**	-0.0537*
	(0.0046)	(0.0081)	(0.0046)	(0.0068)	(0.0068)
Number of Observations[1]	156,248	85,026	71,222	54,188	102,060
Pseudo R^2	0.2155	0.2392	0.1823	0.1998	0.2095
Log Likelihood	-47326.712	-28299.247	-18338.929	-11030.348	-35669.386

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-14: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2007.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Age Groups				
10 to 12 years	-0.0402*	-0.0333*	-0.1266*	-0.0622*
	(0.0027)	(0.0030)	(0.0038)	(0.0031)
15 to 17 years	0.0555*	0.0503*	0.1636*	0.0953*
	(0.0037)	(0.0038)	(0.0047)	(0.0042)
Child Characteristics				
Biological Child	-0.0440*	-0.1513*	-0.1227*	-0.0391*
	(0.0055)	(0.0079)	(0.0065)	(0.0055)
Household Head's Characteristics				
Age	-0.0005*	-0.0007*	0.0006**	-0.0003**
	(0.0001)	(0.0001)	(0.0002)	(0.0001)
Female Headed	-0.0073	-0.0052	-0.0485	0.0019
	(0.0248)	(0.0232)	(0.0406)	(0.0467)
Household Head's Education				
Completed Primary	-0.0252*	-0.0178**	-0.0565*	-0.0385*
	(0.0041)	(0.0056)	(0.0057)	(0.0044)
Junior Secondary	-0.0340*	-0.0271*	-0.0923*	-0.0475*
	(0.0027)	(0.0039)	(0.0044)	(0.0032)
Senior Secondary	-0.0553*	-0.0397*	-0.1126*	-0.0570*
	(0.0038)	(0.0049)	(0.0041)	(0.0030)
Tertiary Education	-0.0426*	-0.0279*	-0.1189*	-0.00511*
	(0.0023)	(0.0037)	(0.0044)	(0.0038)
Household Head's Employment				
Employer	0.0299*	0.0332*	0.0689*	0.0284*
	(0.0044)	(0.0047)	(0.0051)	(0.0041)
Employee	-0.0006	-0.0039	0.0180**	0.0042
	(0.0026)	(0.0029)	(0.0057)	(0.0043)
Casual Worker	0.0127*	0.0053	0.0696*	0.0205***
	(0.0089)	(0.0091)	(0.0177)	(0.0126)
Unpaid Worker	0.0391**	0.0383**	0.0684*	0.0470*
	(0.0177)	(0.0205)	(0.0172)	(0.0139)
Others	0.0078	-0.0010	0.0257**	0.0409*
	(0.0057)	(0.0053)	(0.0121)	(0.0110)
Income (Rp.)				
Household Income	-0.0094*	0.0008	-0.0447*	-0.0204*
	(0.0013)	(0.0009)	(0.0036)	(0.0026)
Square of Household Income	0.0003*	0.00004	0.0024*	0.0015*
	(0.0001)	(0.00003)	(0.0003)	(0.0002)
Household Characteristics				
Birth Order	0.0082*	0.0090*	0.0398*	0.0141*
	(0.0022)	(0.0022)	(0.0031)	(0.0022)
Number of Children	0.0025	0.0028	0.0076**	0.0003
	(0.0022)	(0.0022)	(0.0033)	(0.0024)
Household Size	-0.0018***	-0.0055*	-0.0113*	0.0043*
	(0.0010)	(0.0010)	(0.0017)	(0.0012)
Province				
NAD	-0.0201**	-0.0247**	-0.0992*	-0.0708*
	(0.0064)	(0.0056)	(0.0060)	(0.0022)
North Sumatera	0.0058	0.0168	0.0557*	0.0183**
	(0.0120)	(0.0152)	(0.0129)	(0.0079)
West Sumatera	0.0053*	-0.0006	-0.0645*	-0.0580*
	(0.0127)	(0.0122)	(0.0084)	(0.0032)
Riau	-0.0001	-0.0039	-0.0565*	-0.0660*
	(0.0120)	(0.0125)	(0.0096)	(0.0025)
Jambi	0.0165	0.0062	-0.0740*	-0.0668*
	(0.0166)	(0.0156)	(0.0084)	(0.0024)

Table 3-14: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
South Sumatera	0.0038	0.0021	-0.0475*	-0.0520*
	(0.0126)	(0.0133)	(0.0094)	(0.0036)
Bengkulu	0.0120	-0.0031	-0.0653*	-0.0619*
	(0.0163)	(0.0133)	(0.0090)	(0.0028)
Lampung	0.0060	0.0288***	0.0163	-0.0479*
	(0.0137)	(0.0207)	(0.0131)	(0.0043)
Bangka Belitung	0.0310***	0.0225	0.0999*	-0.0192***
	(0.0205)	(0.0207)	(0.0221)	(0.0094)
Riau Islands	-0.0100	0.0004	-0.0445**	-0.0612*
	(0.0095)	(0.0136)	(0.0171)	(0.0046)
DKI Jakarta	-0.0130	0.0319**	-	-
	(0.0081)	(0.0185)		
West Java	-0.0149	0.0136	-0.1000*	-0.0585*
	(0.0077)	(0.0142)	(0.0059)	(0.0031)
Central Java	-0.0098	0.0121	-0.0801*	-0.0552*
	(0.0087)	(0.0141)	(0.0070)	(0.0034)
DIY	-0.0091	0.0609**	-0.0124	-0.0209
	(0.0119)	(0.0329)	(0.0203)	(0.0120)
East Java	-0.0109	0.0044	-0.0565*	-0.0544*
	(0.0085)	(0.0125)	(0.0082)	(0.0034)
Banten	-0.0184***	0.0036	-0.1141*	-0.0621*
	(0.0070)	(0.0136)	(0.0057)	(0.0030)
Bali	0.0266***	0.1607*	0.0945*	0.0879*
	(0.0186)	(0.0441)	(0.0210)	(0.0169)
West Nusa Tenggara	-0.0024	0.0429**	-0.0184	-0.0177**
	(0.0114)	(0.0239)	(0.0132)	(0.0076)
East Nusa Tenggara	-0.0139	-0.0107	-0.0092	-0.0246*
	(0.0084)	(0.0101)	(0.0106)	(0.0055)
West Kalimantan	-0.0012	-0.0031	-0.0285**	-0.0391*
	(0.0117)	(0.0127)	(0.0103)	(0.0046)
Central Kalimantan	0.0267***	0.0272	-0.0130	-0.0409*
	(0.0185)	(0.0208)	(0.0114)	(0.0046)
South Kalimantan	0.0123	0.0137	-0.0291**	-0.0279*
	(0.0151)	(0.0171)	(0.0108)	(0.0060)
East Kalimantan	-0.0198**	-0.0163	-0.0809*	-0.0677*
	(0.0064)	(0.0081)	(0.0085)	(0.0023)
North Sulawesi	0.0104	0.0044	-0.0212	-0.0669*
	(0.0154)	(0.0157)	(0.0122)	(0.0025)
Central Sulawesi	0.0506**	0.0176	0.0664*	-0.0442*
	(0.0262)	(0.0208)	(0.0155)	(0.0048)
South Sulawesi	0.0206	0.0034	0.0647*	-0.0401*
	(0.0159)	(0.0133)	(0.0133)	(0.0044)
Southeast Sulawesi	0.0158	0.0131	0.1182*	-0.0142***
	(0.0167)	(0.0181)	(0.0166)	(0.0072)
Gorontalo	-0.0077	-0.0083	0.0296***	-0.0413*
	(0.0122)	(0.0122)	(0.0160)	(0.0056)
West Sulawesi	0.0028	-0.0315**	0.0307**	-0.0412*
	(0.0152)	(0.0036)	(0.0161)	(0.0059)
Maluku	-0.0028	-0.0182	-0.0549*	-0.0410*
	(0.0128)	(0.0086)	(0.0107)	(0.0054)
North Maluku	0.0273	0.0400***	-0.0334**	-0.0457*
	(0.0219)	(0.0275)	(0.0124)	(0.0050)
West Papua	-0.0205	-0.0247**	-0.0610*	-0.0416*
	(0.0093)	(0.0069)	(0.0126)	(0.0062)

Table 3-14: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	**Girls**	**Boys**	**Girls**
Number of Observations[1]	28,590	25,598	56,436	45,624
Pseudo R^2	0.2156	0.2196	0.2159	0.1784
Log Likelihood	-5864.347	-4919.532	-22271.233	-13086.717

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-15: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years, SUSENAS 2007.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Characteristics					
Girls	-0.0224*	-	-	-0.0010	-0.0367
	(0.0012)			(0.0014)	(0.0018)
Biological Child	-0.0106*	-0.0030	-0.0176*	-0.0232*	-0.0032
	(0.0030)	(0.0041)	(0.0042)	(0.0049)	(0.0040)
Household Head's Characteristics					
Age	0.0004*	-0.0006*	0.0002***	-0.00004	0.0007*
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0017	-0.0220	0.0297	0.0007	0.0063
	(0.0213)	(0.0253)	(0.0356)	(0.0238)	(0.0328)
Household Head's Education					
Completed Primary	-0.0255*	-0.0300*	-0.0207*	-0.0123*	-0.0331*
	(-0.0023)	(0.0034)	(0.0030)	(0.0032)	(0.0034)
Junior Secondary	-0.0297*	-0.0391*	-0.0193*	-0.0150*	-0.0395*
	(0.0017)	(0.0022)	(0.0024)	(0.0024)	(0.0025)
Senior Secondary	-0.0366*	-0.0456*	-0.0261*	-0.0228*	-0.0447*
	(0.0018)	(0.0026)	(0.0024)	(0.0030)	(0.0024)
Tertiary Education	-0.0312*	-0.0418*	-0.0201*	-0.0163*	-0.0423*
	(0.0019)	(0.0026)	(0.0028)	(0.0023)	(0.0032)
Household Head's Employment					
Employer	0.0364*	0.0409*	0.0279*	0.0221*	0.0399*
	(0.0024)	(0.0036)	(0.0031)	(0.0035)	(0.0033)
Employee	0.0040***	0.0039	0.0034	0.0001	0.0076**
	(0.0022)	(0.0032)	(0.0028)	(0.0019)	(0.0036)
Casual Worker	0.0336*	0.0538*	0.0125*	0.0094	0.0492*
	(0.0076)	(0.0123)	(0.0086)	(0.0069)	(0.117)
Unpaid Worker	0.0499*	0.0449*	0.0517*	0.0414*	0.0514*
	(0.0089)	(0.0122)	(0.0125)	(0.0155)	(0.0113)
Others	0.0092*	0.0083	0.0087	-0.0011	0.0151*
	(0.0049)	(0.0072)	(0.0064)	(0.0038)	(0.0081)
Income (Rp.)					
Household Income	-0.0077*	-0.0141*	-0.0043**	-0.0023**	-0.0171*
	(0.0012)	(0.0019)	(0.0013)	(0.0008)	(0.0022)
Square of Household Income	0.0002*	0.0006*	0.0001	0.0001**	0.0008*
	(0.00005)	(0.0001)	(0.00003)	(0.00002)	(0.0001)
Household Characteristics					
Birth Order	0.0202*	0.0257*	0.0139*	0.0085*	0.0283*
	(0.0010)	(0.0015)	(0.0013)	(0.0011)	(0.0014)
Number of Children	0.0062*	0.0084*	0.0040**	0.0018	0.0100*
	(0.0011)	(0.0016)	(0.0014)	(0.0012)	(0.0016)
Household Size	-0.0032*	-0.0039*	-0.0021**	-0.0014***	-0.0042*
	(0.0007)	(0.0010)	(0.0009)	(0.0008)	(0.0010)
Rural	0.0222*	0.0314*	0.0122*	-	-
	(0.0015)	(0.0022)	(0.0019)		
Province					
NAD	-0.0399*	-0.0417*	-0.0350*	-0.0118***	-0.0573*
	(0.0014)	(0.0028)	(0.0013)	(0.0046)	(0.0020)
North Sumatera	0.0171*	0.0317*	0.0052	0.0117	0.0312*
	(0.0046)	(0.0080)	(0.0047)	(0.0105)	(0.0068)
West Sumatera	-0.0300*	-0.0261*	-0.0294*	0.0044	-0.0458*
	(0.0021)	(0.0043)	(0.0018)	(0.0093)	(0.0028)

Table 3-15: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Riau	-0.0340*	-0.0327*	-0.0313*	-0.0032	-0.0498*
	(0.0020)	(0.0041)	(0.0017)	(0.0077)	(0.0028)
Jambi	-0.0366*	-0.0348*	-0.0339*	0.0004	-0.0544*
	(0.0017)	(0.0039)	(0.0013)	(0.0092)	(0.0023)
South Sumatera	-0.0312*	-0.0289*	-0.0296*	-0.0011	-0.0460*
	(0.0020)	(0.0041)	(0.0018)	(0.0080)	(0.0028)
Bengkulu	-0.0336*	0.0295*	-0.0327*	0.0033	-0.0502*
	(0.0020)	(0.0045)	(0.0015)	(0.0104)	(0.0026)
Lampung	-0.0159*	-0.0006	-0.0249*	0.0043	-0.0244*
	(0.0033)	(0.0070)	(0.0025)	(0.0102)	(0.0046)
Bangka Belitung	0.0062*	0.0248**	-0.0238*	0.0033	-0.0022
	(0.0054)	(0.0120)	(0.0035)	(0.0106)	(0.0089)
Riau Islands	-0.0301*	-0.0262**	-0.0293*	-0.0063	-0.0427*
	(0.0033)	(0.0070)	(0.0027)	(0.0067)	(0.0058)
DKI Jakarta	-0.0312*	-0.0344**	-0.0279*	-0.0079	-
	(0.0033)	(0.0063)	(0.0028)	(0.0057)	
West Java	-0.0385*	-0.0432*	-0.0323*	-0.0078	-0.0564*
	(0.0016)	(0.0028)	(0.0017)	(0.0057)	(0.0021)
Central Java	-0.0340*	-0.0360*	-0.0297*	-0.0064	-0.0488*
	(0.0018)	(0.0033)	(0.0019)	(0.0060)	(0.0026)
DIY	-0.0184**	-0.0238*	0.0133	0.0148	-0.0329**
	(0.0055)	(0.0085)	(0.0066)	(0.0154)	(0.0077)
East Java	-0.0310*	-0.0275*	-0.0307*	-0.0068*	-0.0429*
	(0.0020)	(0.0039)	(0.0019)	(0.0059)	(0.0029)
Banten	-0.0390*	-0.0461*	-0.0312*	0.0079	-0.0580*
	(0.0016)	(0.0026)	(0.0018)	(0.0060)	(0.0020)
Bali	0.0406*	0.0411*	0.0383*	0.0471**	0.0576*
	(0.0081)	(0.0122)	(0.0103)	(0.0213)	(0.0121)
West Nusa Tenggara	-0.0118**	-0.0073	0.0138**	0.0146*	-0.0201**
	(0.0040)	(0.0071)	(0.0041)	(0.0131)	(0.0056)
East Nusa Tenggara	-0.0175*	-0.0150**	-0.0177*	0.0047	-0.0263*
	(0.0027)	(0.0049)	(0.0028)	(0.0101)	(0.0038)
West Kalimantan	-0.0298*	-0.0295*	-0.0273*	-0.0023	-0.0431*
	(0.0021)	(0.0040)	(0.0020)	(0.0081)	(0.0030)
Central Kalimantan	-0.0208*	-0.0124***	-0.0243*	0.0251**	-0.0352*
	(0.0029)	(0.0058)	(0.0025)	(0.0159)	(0.0037)
South Kalimantan	-0.0234*	-0.0256*	-0.0201*	0.0045	-0.0350*
	(0.0028)	(0.0048)	(0.0031)	(0.0101)	(0.0039)
East Kalimantan	-0.0368*	-0.0361*	-0.0335*	-0.0112***	-0.0519*
	(0.0017)	(0.0038)	(0.0014)	(0.0047)	(0.0026)
North Sulawesi	-0.0246*	-0.0124***	-0.0292*	0.0110	-0.0387*
	(0.0029)	(0.0066)	(0.0020)	(0.0125)	(0.0039)
Central Sulawesi	-0.0059	0.0206**	-0.0222*	0.0303**	-0.0139**
	(0.0041)	(0.0090)	(0.0028)	(0.0185)	(0.0054)
South Sulawesi	-0.0004	0.0315*	-0.0213*	0.0171***	-0.0027
	(0.0038)	(0.0083)	(0.0026)	(0.0127)	(0.0052)
Southeast Sulawesi	0.0223*	0.0586*	-0.0051	0.0172	0.0290*
	(0.0057)	(0.0112)	(0.0046)	(0.0143)	(0.0077)
Gorontalo	-0.0098**	0.0058	-0.0188*	-0.0041	-0.0128***
	(0.0044)	(0.0089)	(0.0038)	(0.0088)	(0.0064)
West Sulawesi	-0.0138**	0.0007	-0.0224*	-0.0096	-0.0180**
	(0.0040)	(0.0082)	(0.0033)	(0.0067)	(0.0059)
Maluku	-0.0190*	-0.0182**	-0.0176*	0.0234***	-0.0315*
	(0.0034)	(0.0061)	(0.0036)	(0.0170)	(0.0045)
North Maluku	-0.0181*	-0.0138***	-0.0193*	0.0490**	-0.0331*
	(0.0037)	(0.0068)	(0.0037)	(0.0247)	(0.0045)

Table 3-15: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
West Papua	-0.0331*	-0.0360*	-0.0281*	-0.0072	-0.0473*
	(0.0026)	(0.0050)	(0.0025)	(0.0084)	(0.0038)
Number of Observations[1]	104,209	55,449	48,760	34,645	69,564
Pseudo R^2	0.1323	0.1446	0.1136	0.0862	0.1193
Log Likelihood	-22146.323	-13341.059	-8622.089	-3975.012	-17993.196

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-16: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years by Region and Gender, SUSENAS 2007.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Child Characteristics				
Biological Child	-0.0076*	-0.0415*	0.0008	-0.0067
	(0.0051)	(0.0082)	(0.0060)	(0.0051)
Household Head's Characteristics				
Age	0.00003	-0.0001	0.0011*	0.0004**
	(0.0001)	0.0001)	(0.0002)	(0.0001)
Female Headed	0.0050	0.0052	-0.0580	0.0580
	(0.0284)	(0.0290)	(0.0238)	(0.0545)
Household Head's Education				
Completed Primary	-0.0162*	-0.0050	-0.0398*	-0.0263*
	(0.0038)	(0.0057)	(0.0053)	(0.0041)
Junior Secondary	-0.0195*	-0.0051	-0.0535*	-0.0250*
	(0.0025)	(0.0054)	(0.0039)	(0.0032)
Senior Secondary	-0.0270*	-0.0140**	-0.0597*	-0.0292*
	(0.0037)	(0.0052)	(0.0037)	(0.0031)
Tertiary Education	-0.0192*	-0.0098***	-0.0605*	-0.0236*
	(0.0024)	(0.0046)	(0.0044)	(0.0046)
Household Head's Employment				
Employer	0.0208*	0.0194*	0.0515*	0.0273*
	(0.0047)	(0.0048)	(0.0050)	(0.0041)
Employee	-0.0007	0.0008	0.0092***	0.0057
	(0.0026)	(0.0027)	(0.0055)	(0.0044)
Casual Worker	0.0133	0.0056	0.0819*	0.0153
	(0.0100)	(0.0090)	(0.0191)	(0.0126)
Unpaid Worker	0.0428**	0.0353**	0.0486**	0.0521*
	(0.0204)	(0.0223)	(0.0164)	(0.0152)
Others	0.0041	-0.0071	0.0094	0.0222**
	(0.0059)	(0.0042)	(0.0118)	(0.0113)
Income (Rp.)				
Household Income	-0.0050*	-0.0009	-0.0231*	-0.0108*
	(0.0013)	(0.0010)	(0.0036)	(0.0028)
Square of Household Income	0.0002*	0.00004***	0.0012*	0.0003
	(0.00005)	(0.00002)	(0.0002)	(0.0003)
Household Characteristics				
Birth Order	0.0081*	0.0087*	0.0390*	0.0171*
	(0.0015)	(0.0016)	(0.0023)	(0.0018)
Number of Children	-0.0017	-0.0023	0.0136*	0.0060**
	(0.0016)	(0.0017)	(0.0025)	(0.0020)
Household Size	-0.0006	-0.0020***	-0.0066*	-0.0019
	(0.0010)	(0.0011)	(0.0016)	(0.0012)
Province				
NAD	-0.0067	-0.0153**	0.0640*	-0.0460*
	(0.0093)	(0.0039)	(0.0043)	(0.0018)
North Sumatera	0.0201	0.0024	0.0516*	0.0143**
	(0.0192)	(0.0106)	(0.0119)	(0.0068)
West Sumatera	0.0187	-0.0081	-0.0473*	-0.0385*
	(0.0200)	(0.0070)	(0.0060)	(0.0024)
Riau	0.0023	-0.0086	-0.0518*	-0.0417*
	(0.0141)	(0.0073)	(0.0061)	(0.0022)
Jambi	0.0126	-0.0110	-0.0579*	-0.0449*
	(0.0193)	(0.0065)	(0.0055)	(0.0017)
South Sumatera	0.0129	-0.0124	-0.0489*	-0.0381*
	(0.0183)	(0.0052)	(0.0058)	(0.0025)
Bengkulu	0.0166	-0.0086	-0.0490*	-0.0434*
	(0.0215)	(0.0078)	(0.0064)	(0.0018)

Table 3-16: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Lampung	0.0079	-0.0012	-0.0026*	-0.0341*
	(0.0169)	(0.0108)	(0.0101)	(0.0031)
Bangka Belitung	0.0240	-0.0141	0.0405**	-0.0263**
	(0.0249)	(0.0053)	(0.0189)	(0.0060)
Riau Islands	-0.0028	-0.0092	-0.0356**	-0.00403*
	(0.0117)	(0.0071)	(0.0134)	(0.0036)
DKI Jakarta	-0.0057	-0.0107	-	-
	(0.0094)	(0.0059)		
West Java	-0.0059	-0.0106	-0.0680*	-0.0425*
	(0.0090)	(0.0063)	(0.0039)	(0.0021)
Central Java	-0.0042	-0.0094	-0.0552*	-0.0385*
	(0.0096)	(0.0066)	(0.0049)	(0.0025)
DIY	0.0046	0.0183	-0.0385*	-0.0245**
	(0.0175)	(0.0217)	(0.0138)	(0.0081)
East Java	-0.0020	-0.0116	-0.0405*	-0.0388*
	(0.0105)	(0.0059)	(0.0061)	(0.0024)
Banten	-0.0084	-0.0089	-0.0723*	-0.0424*
	(0.0086)	(0.0069)	(0.0037)	(0.0021)
Bali	0.0234	0.0657**	0.0754*	0.0420*
	(0.0234)	(0.0338)	(0.0200)	(0.0136)
West Nusa Tenggara	0.0070	0.0172	-0.0096	-0.0229**
	(0.0163)	(0.0179)	(0.0111)	(0.0050)
East Nusa Tenggara	0.0030	0.0025	-0.0236**	-0.0240*
	(0.0146)	(0.0120)	(0.0072)	(0.0036)
West Kalimantan	0.0091	-0.0120	-0.0474*	-0.0348*
	(0.0172)	(0.0058)	(0.0059)	(0.0028)
Central Kalimantan	0.0358***	0.0129	-0.0268**	-0.0353*
	(0.0284)	(0.0165)	(0.0079)-	(0.0028)
South Kalimantan	0.0077	-0.0013	0.0418*	-0.0268*
	(0.0167)	(0.0106)	(0.0069)	(0.0040)
East Kalimantan	-0.0073	-0.0140***	-0.0539*	-0.0436*
	(0.0088)	(0.0045)	(0.0061)	(0.0019)
North Sulawesi	0.0213	-0.0005	-0.0241**	-0.0405*
	(0.0234)	(0.0113)	(0.0094)	(0.0024)
Central Sulawesi	0.0538**	0.0085	0.0200***	-0.0314*
	(0.0372)	(0.0158)	(0.0120)	(0.0034)
South Sulawesi	0.0324***	0.0022	0.0421*	-0.0290*
	(0.0252)	(0.0111)	(0.0115)	(0.0033)
Southeast Sulawesi	0.0222	0.0092	0.0809*	-0.0079
	(0.0236)	(0.0154)	(0.0151)	(0.0059)
Gorontalo	0.0045	-0.0110	0.0091	-0.0233**
	(0.0177)	(0.0070)	(0.0131)	(0.0052)
West Sulawesi	0.0021	0.0018	0.0015	-0.0271*
	(0.0157)	(0.0136)	(0.0121)	(0.0046)
Maluku	0.0580**	-0.0048	-0.0389*	-0.0228*
	(0.0390)	(0.0104)	(0.0077)	(0.0048)
North Maluku	0.0641**	0.0335***	-0.0311**	-0.0298*
	(0.0429)	(0.0275)	(0.0088)	(0.0041)
West Papua	0.0061	-0.0161	-0.0576*	-0.0354*
	(0.0206)	(0.0042)	(0.0071)	(0.0036)

Table 3-16: Marginal Effects of Probit Estimation of Work Choices of Children Aged 10-14 years by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	**Girls**	**Boys**	**Girls**
Number of Observations[1]	18,150	16,495	37,299	32,265
Pseudo R^2	0.1057	0.0905	0.1183	0.1120
Log Likelihood	-2088.353	-1829.526	-11167.646	-6702.162

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-17: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years, SUSENAS 2007.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Characteristics					
Girls	-0.0944*	-	-	-0.0142**	-0.1514*
	(0.0037)			(0.0046)	(0.0051)
Biological Child	-0.2010*	-0.1100*	-0.2477*	-0.2753*	-0.0990*
	(0.0082)	(0.0115)	(0.0109)	(0.0112)	(0.0109)
Household Head's Characteristics					
Age	-0.0008**	-0.0001	-0.0015*	-0.007*	-0.00004
	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Female Headed	-0.1008	-0.0291	-0.0225	-0.0663	-0.1064
	(0.0544)	(0.0945)	(0.0870)	(0.0534)	(0.0855)
Household Head's Education					
Completed Primary	0.0806*	-0.0823*	-0.0781*	-0.0639*	-0.0846*
	(0.0077)	(0.0107)	(0.0106)	(0.0116)	(0.0099)
Junior Secondary	-0.1490*	-0.1624*	-0.1247*	-0.1014*	-0.1700*
	(0.0060)	(0.0088)	(0.0075)	(0.0076)	(0.0087)
Senior Secondary	-0.2007*	-0.2343*	-0.1543*	-0.1514*	-0.2234*
	(0.0056)	(0.0078)	(0.0075)	(0.0092)	(0.0078)
Tertiary Education	-0.1747*	-0.2416*	-0.1174*	-0.1202*	-0.2308*
	(0.0058)	(0.0069)	(0.0080)	(0.0065)	(0.0093)
Household Head's Employment					
Employer	0.1000*	0.1039*	0.0696*	0.0808*	0.0769*
	(0.0067)	(0.0089)	(0.0086)	(0.0091)	(0.0088)
Employee	0.0051	0.0217**	-0.0129	-0.0037	0.0244**
	(0.0060)	(0.0087)	(0.0078)	(0.0063)	(0.0093)
Casual Worker	0.0319***	0.0420***	0.0231*	0.0153	0.0366
	(0.0174)	(0.0250)	(0.0237)	(0.0194)	(0.0252)
Unpaid Worker	0.0895*	0.0919**	0.0635**	0.0520***	0.0718**
	(0.0214)	(0.0290)	(0.0292)	(0.0331)	(0.0263)
Others	0.0492*	0.0384**	0.0487**	0.0159	0.0672*
	(0.0127)	(0.0176)	(0.0168)	(0.0128)	(0.0198)
Income (Rp.)					
Household Income	-0.0239*	-0.0500*	-0.0089**	-0.0072**	-0.0668*
	(0.0042)	(0.0048)	(0.0042)	(0.0026)	(0.0061)
Square of Household Income	0.0013*	0.0016*	0.0009**	0.0005**	0.0046*
	(0.0004)	(0.0004)	(0.0003)	(0.0002)	(0.0007)
Household Characteristics					
Birth Order	0.0839*	0.1098*	0.0531*	0.0464*	0.1074*
	(0.0061)	(0.0090)	(0.0074)-	(0.0069)	(0.0087)
Number of Children	0.0394*	0.0617*	0.0192**	0.0115***	0.0626*
	(0.0062)	(0.0092)	(0.0075)	(0.0069)	(0.0088)
Household Size	-0.0153*	-0.0139*	-0.0120	-0.0112*	-0.0148*
	(0.0019)	(0.0027)	(0.0024)	(0.0022)	(0.0027)
Rural	0.0833*	0.1057*	0.0536*	-	-
	(0.0044)	(0.0062)	(0.0059)		
Province					
NAD	-0.1293*	-0.1248*	-0.1222*	-0.0533**	-0.1746*
	(0.0097)	(0.0168)	(0.0093)	(0.0193)	(0.0132)
North Sumatera	0.0356**	0.0302	0.0379**	0.0354	0.0515**
	(0.0153)	(0.0225)	(0.0195)	(0.0297)	(0.0197)
West Sumatera	-0.0678*	-0.0515**	-0.0774*	0.0203	-0.1073*
	(0.0130)	(0.0213)	(0.0136)	(0.0299)	(0.0169)
Riau	-0.0711*	-0.0216	-0.1107*	0.0244	-0.1104*
	(0.0140)	(0.0242)	(0.0118)	(0.0329)	(0.0181)

Table 3-17: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Jambi	-0.0656*	-0.0381	-0.0908*	0.0898**	-0.1239*
	(0.0145)	(0.0237)	(0.0143)	(0.0423)	(0.0175)
South Sumatera	-0.0187	0.0016	-0.0408**	0.0495	-0.0472**
	(0.0153)	(0.0239)	(0.0172)	(0.0346)	(0.0194)
Bengkulu	-0.0568**	-0.0365	-0.0770*	0.0404	-0.0990*
	(0.0151)	(0.0243)	(0.0154)	(0.0380)	(0.0187)
Lampung	0.0357**	0.0717**	-0.0223	0.0853**	0.0133
	(0.0184)	(0.0273)	(0.0205)	(0.0405)	(0.0225)
Bangka Belitung	0.1309*	0.1794*	0.0731**	0.1281**	0.1632*
	(0.0253)	(0.0358)	(0.0330)	(0.0478)	(0.0334)
Riau Islands	-0.0582**	-0.0374	-0.0730**	0.0154	-0.0956**
	(0.0195)	(0.0309)	(0.0207)	(0.0319)	(0.0319)
DKI Jakarta	0.0553**	-0.0560***	0.0768**	0.0802**	-
	(0.0209)	(0.0281)	(0.0259)	(0.0351)	
West Java	-0.0656*	-0.1049*	-0.0256	0.0338	-0.1396*
	(0.0125)	(0.0175)	(0.0166)	(0.0290)	(0.0151)
Central Java	-0.0542*	-0.0703**	-0.0385**	0.0425	-0.1138*
	(0.0126)	(0.0187)	(0.0156)	(0.0300)	(0.0156)
DIY	0.0456***	0.0274	0.0608***	0.0464	0.0582
	(0.0282)	(0.0386)	(0.0385)	(0.0436)	(0.0397)
East Java	-0.0491*	-0.0559**	-0.0454**	0.0266	-0.0892*
	(0.0129)	(0.0194)	(0.0152)	(0.0285)	(0.0164)
Banten	-0.1048*	-0.1425*	-0.0660**	0.0008	-0.1767*
	(0.0134)	(0.0186)	(0.0171)	(0.0283)	(0.0168)
Bali	0.1794*	0.1144*	0.2504*	0.2108*	0.1874*
	(0.0246)	(0.0327)	(0.0365)	(0.0517)	(0.0312)
West Nusa Tenggara	0.0177	-0.0135	0.0455***	0.0468	0.0133
	(0.0187)	(0.0262)	(0.0256)	(0.0346)	(0.0251)
East Nusa Tenggara	0.0035	0.0198	-0.0169	-0.0512**	0.0200
	(0.0156)	(0.0238)	(0.0183)	(0.0198)	(0.0203)
West Kalimantan	0.0180***	0.0488**	0.0022	0.0275	0.0319
	(0.0171)	(0.0257)	(0.0204)	(0.0333)	(0.0215)
Central Kalimantan	0.0273	0.0530**	-0.0027	0.0755**	0.0144
	(0.0172)	(0.0259)	(0.0204)	(0.0393)	(0.0213)
South Kalimantan	0.0386**	0.0499***	0.0212	0.0761**	0.0305*
	(0.0183)	(0.0267)	(0.0231)	(0.0396)	(0.0228)
East Kalimantan	-0.1139*	-0.1033*	-0.1122*	-0.0391	-0.1561*
	(0.0120)	(0.0203)	(0.0116)	(0.0214)	(0.0170)
North Sulawesi	-0.0452**	0.0249	-0.1205*	0.0314	-0.0840*
	(0.0160)	(0.0272)	(0.0115)	(0.0358)	(0.0201)
Central Sulawesi	0.0688*	0.1659*	-0.0513*	0.0578	0.0650**
	(0.0201)	(0.0306)	(0.0191)	(0.0424)	(0.0240)
South Sulawesi	0.0268***	0.0889*	-0.0464**	0.0445	0.0257
	(0.0157)	(0.0248)	(0.0157)	(0.0332)	(0.0197)
Southeast Sulawesi	0.0729*	0.1422*	-0.0162	0.0434	0.0786*
	(0.0190)	(0.0285)	(0.0205)	(0.0375)	(0.0230)
Gorontalo	0.0082	0.0724**	-0.0569**	0.0046	0.0019
	(0.0198)	(0.0315)	(0.0196)	(0.0357)	(0.0249)
West Sulawesi	0.0207	0.1025**	-0.0705*	0.0018	0.0225
	(0.0215)	(0.0343)	(0.0199)	(0.0379)	(0.0271)
Maluku	-0.0846*	-0.0764**	-0.0841*	-0.0572**	-0.1051*
	(0.0146)	(0.0235)	(0.0156)	(0.0204)	(0.0202)
North Maluku	-0.0392**	-0.0125	-0.0572**	0.0335	-0.0611**
	(0.0176)	(0.0281)	(0.0192)	(0.0383)	(0.0228)

Table 3-17: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
West Papua	-0.0357	-0.0421	-0.0295	-0.0715**	-0.0193
	(0.0216)	(0.0326)	(0.0256)	(0.0226)	(0.0306)
Number of Observations[1]	52,039	29,557	22,462	19,543	32,496
Pseudo R^2	0.1390	0.1595	0.1210	0.1360	0.1182
Log Likelihood	-25504.299	-15275.281	-9691.859	-7029.243	-18017.160

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-18: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years by Region and Gender, SUSENAS 2007.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Child Characteristics				
Biological Child	-0.1430*	-0.3464*	-0.0652*	-0.1253*
	(0.0151)	(0.0152)	(0.0148)	(0.0150)
Household Head's Characteristics				
Age	-0.0014*	-0.0018*	0.0009**	-0.0012**
	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Female Headed	-0.0534	-0.0603**	0.0216	-0.0443
	(0.0637)	(0.0179)	(0.1553)	(0.0503)
Household Head's Education				
Completed Primary	-0.0660*	-0.0968*	-0.0860*	-0.0796*
	(0.0144)	(0.0111)	(0.0135)	(0.0136)
Junior Secondary	-0.0976*	-0.1243*	-0.1957*	-0.1316*
	(0.0097)	(0.0150)	(0.0128)	(0.0107)
Senior Secondary	-0.1616*	-0.0930*	-0.2653*	-0.1653*
	(0.0110)	(0.0121)	(0.0115)	(0.0096)
Tertiary Education	-0.1399*	0.0693*	-0.2974*	-0.1552*
	(0.0066)	(0.0128)	(0.0130)	(0.0113)
Household Head's Employment				
Employer	0.0688*	0.0693*	0.1041*	0.0269**
	(0.0120)	(0.0128)	(0.0118)	(0.0122)
Employee	0.0025	-0.0144	0.0415**	0.0037
	(0.0084)	(0.0090)	(0.0127)	(0.0125)
Casual Worker	0.0215	0.0100	0.0436	0.0263
	(0.0256)	(0.0289)	(0.0345)	(0.0336)
Unpaid Worker	0.0331	0.0586	0.1025**	0.0201
	(0.0400)	(0.0502)	(0.0356)	(0.0335)
Others	0.0173	-0.0003	0.0512**	0.0802**
	(0.0170)	(0.0167)	(0.0264)	(0.0275)
Income (Rp.)				
Household Income	-0.0238*	0.0007	-0.0791*	-0.0601*
	(0.0039)	(0.0031)	(0.0079)	(0.0092)
Square of Household Income	0.0007*	0.0003***	0.0043*	0.0069*
	(0.0002)	(0.0002)	(0.0008)	(0.0013)
Household Characteristics				
Birth Order	0.0446*	0.0428*	0.1413*	0.0629*
	(0.0098)	(0.0091)	(0.0123)	(0.0109)
Number of Children	-0.0146	-0.0121	0.0870*	0.0338**
	(0.0099)	(0.0090)	(0.0125)	(0.0111)
Household Size	-0.0050***	-0.0126*	-0.0186*	-0.0079**
	(0.0029)	(0.0030)	(0.0037)	(0.0036)
Province				
NAD	-0.0633**	-0.0546***	-0.1579*	-0.1620**
	(0.0226)	(0.0250)	(0.0231)	(0.0114)
North Sumatera	-0.0132	0.0655	0.0524***	0.0452***
	(0.0321)	(0.0468)	(0.0278)	(0.0246)
West Sumatera	-0.0200	0.0349	-0.0717**	-0.1196*
	(0.0322)	(0.0448)	(0.0278)	(0.0157)
Riau	-0.0078	0.0248	-0.0307	-0.1600*
	(0.0366)	(0.0490)	(0.0310)	(0.0125)
Jambi	0.0433	0.0837	-0.0769**	-0.1456*
	(0.0486)	(0.0614)	(0.0295)	(0.0143)
South Sumatera	0.0049	0.00695	0.0007	-0.0823*
	(0.0359)	(0.0537)	(0.0300)	(0.0193)
Bengkulu	0.0189	0.0242	-0.0635**	-0.1159*
	(0.0469)	(0.0494)	(0.0300)	(0.0176)

Table 3-18: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Lampung	0.0068	0.1326**	0.0896**	-0.0748**
	(0.0400)	(0.0653)	(0.0324)	(0.0223)
Bangka Belitung	0.0661	0.1600**	0.2324*	0.0749***
	(0.0542)	(0.0753)	(0.0422)	(0.0448)
Riau Islands	-0.0292	0.0434	-0.0313	-0.1384**
	(0.0321)	(0.0520)	(0.0511)	(0.0259)
DKI Jakarta	-0.0393	0.1633**	-	-
	(0.0274)	(0.0598)		
West Java	-0.0447	0.1085**	-0.1591*	-0.0971*
	(0.0263)	(0.0514)	(0.0232)	(0.0175)
Central Java	-0.0276	0.0973**	-0.1090*	-0.1003*
	(0.0295)	(0.0503)	(0.0242)	(0.0168)
DIY	-0.0491	0.1600**	0.0788	0.0383
	(0.0327)	(0.0826)	(0.0531)	(0.0526)
East Java	-0.0363	0.0694***	-0.0677**	-0.0949*
	(0.0278)	(0.0465)	(0.0255)	(0.0171)
Banten	-0.0603***	0.0572	-0.2057*	-0.1278*
	(0.0232)	(0.0508)	(0.0260)	(0.0186)
Bali	0.0612	0.3476*	0.1306**	0.2491*
	(0.0512)	(0.0839)	(0.0404)	(0.0454)
West Nusa Tenggara	-0.0220	0.1046**	-0.0150	0.0444
	(0.0332)	(0.0617)	(0.0348)	(0.0329)
East Nusa Tenggara	-0.0581***	-0.0529	0.0438	-0.0044
	(0.0241)	(0.0525)	(0.0291)	(0.0240)
West Kalimantan	-0.0190	0.0331	0.0725**	-0.0098
	(0.0341)	(0.0493)	(0.0310)	(0.0245)
Central Kalimantan	0.0356	0.0729	0.0541***	-0.0243
	(0.0455)	(0.0585)	(0.0308)	(0.0241)
South Kalimantan	0.0354	0.0731	0.0479	0.0136
	(0.0459)	(0.0578)	(0.0319)	(0.0285)
East Kalimantan	-0.0680**	-0.0149	-0.1191*	-0.1635*
	(0.0205)	(0.0354)	(0.0301)	(0.0126)
North Sulawesi	0.0021	0.0165	0.0271	-0.1750*
	(0.0405)	(0.0498)	(0.0335)	(0.0110)
Central Sulawesi	0.0627	0.0279	0.1841*	-0.0799**
	(0.0559)	(0.0577)	(0.0332)	(0.0222)
South Sulawesi	0.0250	-0.0037	0.1085*	-0.0629**
	(0.0412)	(0.0378)	(0.0285)	(0.0196)
Southeast Sulawesi	0.0235	0.0146	0.1706*	-0.0331
	(0.0456)	(0.0483)	(0.0313)	(0.0248)
Gorontalo	-0.0319	0.0223	0.1035**	-0.0913**
	(0.0383)	(0.0534)	(0.0372)	(0.0228)
West Sulawesi	0.0195	-0.0728	0.1230**	-0.0830**
	(0.0539)	(0.0283)	(0.0391)	(0.0259)
Maluku	-0.0716**	-0.0488	-0.0818**	-0.1069*
	(0.0211)	(0.0298)	(0.0325)	(0.0200)
North Maluku	-0.0035	0.0555	-0.0153	-0.0895**
	(0.0419)	(0.0615)	(0.0358)	(0.0224)
West Papua	-0.0876**	-0.0509	-0.0162	-0.0234
	(0.0221)	(0.0363)	(0.0445)	(0.0349)

Table 3-18: Marginal Effects of Probit Estimation of Work Choices of Children Aged 15-17 years by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	**Girls**	**Boys**	**Girls**
Number of Observations[1]	10,440	9,097	19,137	13,359
Pseudo R^2	0.1444	0.1837	0.1089	0.1056
Log Likelihood	-3790.549	-3022.652	-11388.513	-6425.691

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Appendix 3-A

Table 3-A1: Variable Names and Definitions

Variables	Definitions
Child Characteristics	
Age	Child's age in completed years
Girls	1 if the child is a girl, 0 otherwise
Son or daughter	1 if the child is a son or daughter to the household, 0 otherwise
Household Head's Characteristics	
Age	Household head's age in completed years
Girls	1 if household head is Girls, 0 otherwise
Household Head's Education	
Not Completed Primary	1 if not completed primary, 0 otherwise (reference)
Completed Primary	1 if completed primary, 0 otherwise
Junior Secondary	1 if completed junior high school, 0 otherwise
Senior Secondary	1 if completed senior high school, 0 otherwise
Tertiary Education	1 if completed tertiary education, 0 otherwise
Household Head's Employment	
Self-Employed	1 if head of household is work as self-employed , 0 otherwise
Employer	(reference)
Employee	1 if head of household is work as employer , 0 otherwise
Casual Worker	1 if head of household is work as employee , 0 otherwise
Unpaid Worker	1 if head of household is work as casual worker , 0 otherwise
Others	1 if head of household is work as unpaid worker , 0 otherwise
	1 if head of household is work as, 0 otherwise
Household Expenditure	
Household Income	Monthly Household Income (excluding children's earnings)
Square root of Household Income	Square of household income
Household Characteristics	
Birth Order	Birth Order of the child in the household
Number of Children	The total number of Children in the household
Household Size	The total number of persons in the household
Rural	1 if household resides in rural areas, 0 otherwise
Province	
NAD	1 if household resides in NAD, 0 otherwise
North Sumatera	1 if household resides in North Sumatera, 0 otherwise
West Sumatera	1 if household resides in West Sumatera, 0 otherwise
Riau	1 if household resides in Riau, 0 otherwise
Jambi	1 if household resides in Jambi, 0 otherwise
South Sumatera	1 if household resides in South Sumatera, 0 otherwise
Bengkulu	1 if household resides in Bengkulu, 0 otherwise
Lampung	1 if household resides in Lampung, 0 otherwise
Bangka-Belitung	1 if household resides in Bangka-Belitung, 0 otherwise
Riau Islands	1 if household resides in Riau Islands, 0 otherwise
DKI Jakarta	1 if household resides in DKI Jakarta, 0 otherwise
West Java	1 if household resides in West Java, 0 otherwise
DIY	1 if household resides in DIY, 0 otherwise
Central Java	1 if household resides in Central Java, 0 otherwise
East Java	1 if household resides in East Java, 0 otherwise

Table 3-A1: Variable Names and Definitions (*continued*).

Variables	Definitions
Banten	1 if household resides in Banten, 0 otherwise
Bali	1 if household resides in Bali, 0 otherwise
West Nusa Tenggara	1 if household resides in West Nusa Tenggara, 0 otherwise
East Nusa Tenggara	1 if household resides in East Nusa Tenggara, 0 otherwise
West Kalimantan	1 if household resides in West Kalimantan, 0 otherwise
Central Kalimantan	1 if household resides in Central Kalimantan, 0 otherwise
South Kalimantan	1 if household resides in South Kalimantan, 0 otherwise
East Kalimantan	1 if household resides in East Kalimantan, 0 otherwise
North Sulawesi	1 if household resides in North Sulawesi, 0 otherwise
Central Sulawesi	1 if household resides in Central Sulawesi, 0 otherwise
South Sulawesi	1 if household resides in South Sulawesi, 0 otherwise
Southeast Sulawesi	1 if household resides in Southeast Sulawesi, 0 otherwise
Gorontalo	1 if household resides in Gorontalo, 0 otherwise
West Sulawesi	1 if household resides in West Sulawesi, 0 otherwise (no respondents in 2005)
Maluku	1 if household resides in Maluku, 0 otherwise
North Maluku	1 if household resides in North Maluku, 0 otherwise
West Papua	1 if household resides in West Papua, 0 otherwise (no respondents in 2005)
Papua	1 if household resides in Papua, 0 otherwise (reference)

Table 3A-2: Descriptive Statistics, SUSENAS 2005.

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Activity					
Working	0.10	0.13	0.08	0.06	0.12
	(0.30)	(0.33)	(0.26)	(0.24)	(0.33)
Child Characteristics					
Age	13.28	13.33	13.22	13.38	13.22
	(2.28)	(2.30)	(2.26)	(2.31)	(2.26)
Girls	0.47	-	-	0.48	0.46
	(0.50)			(0.50)	(0.50)
Biological Child	0.94	0.94	0.93	0.93	0.94
	(0.24)	(0.23)	(0.25)	(0.26)	(0.23)
Household Head's Characteristics					
Age	45.12	45.20	45.04	45.10	45.13
	(8.80)	(8.82)	(8.78)	(8.26)	(9.08)
Female Headed	0.001	0.001	0.001	0.001	0.001
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Household Head's Education					
Not Completed Primary	0.06	0.07	0.06	0.03	0.09
	(0.25)	(0.25)	(0.24)	(0.16)	(0.28)
Completed Primary	0.50	0.51	0.50	0.35	0.59
	(0.50)	(0.50)	(0.50)	(0.48)	(0.49)
Junior Secondary	0.17	0.16	0.17	0.17	0.16
	(0.37)	(0.37)	(0.37)	(0.38)	(0.37)
Senior Secondary	0.20	0.19	0.20	0.32	0.13
	(0.40)	(0.39)	(0.40)	(0.47)	(0.34)
Tertiary Education	0.07	0.06	0.07	0.13	0.03
	(0.25)	(0.24)	(0.26)	(0.34)	(0.18)
Household Head's Employment					
Self-Employed	0.28	0.28	0.29	0.27	0.29
	(0.45)	(0.45)	(0.45)	(0.44)	(0.46)
Employer	0.33	0.34	0.32	0.16	0.42
	(0.47)	(0.47)	(0.47)	(0.37)	(0.49)
Employee	0.27	0.26	0.28	0.45	0.17
	(0.44)	(0.44)	(0.45)	(0.50)	(0.38)
Casual Worker	0.07	0.07	0.07	0.06	0.08
	(0.26)	(0.26)	(0.26)	(0.24)	(0.27)
Unpaid Worker	0.01	0.01	0.01	0.004	0.01
	(0.08)	(0.08)	(0.08)	(0.07)	(0.09)
Others	0.04	0.04	0.04	0.05	0.03
	(0.19)	(0.19)	(0.19)	(0.23)	(0.17)
Income (Rp.)					
Household Income	0.98	0.95	1.01	1.53	0.69
	(1.55)	(1.50)	(1.61)	(1.90)	(1.24)
Square of Household Income	0.37	3.15	3.62	5.94	2.00
	(43.73)	(45.58)	(41.52)	(50.61)	(39.57)
Household Characteristics					
Birth Order	2.34	2.35	2.33	2.25	2.39
	(1.19)	(1.20)	(1.18)	(1.13)	(1.22)
Number of Children	1.79	1.79	1.79	1.67	1.85
	(1.33)	(1.33)	(1.33)	(1.26)	(1.36)
Household Size	5.57	5.57	5.57	5.54	5.58
	(1.66)	(1.66)	(1.65)	(1.65)	(1.66)
Rural	0.65	0.66	0.64	-	-
	(0.48)	(0.47)	(0.48)		
Province					
NAD	0.05	0.05	0.05	0.04	0.05
	(0.21)	(0.21)	(0.21)	(0.19)	(0.22)

Table 3A-2: Descriptive Statistics, SUSENAS 2005 (*continued*).

	All	Gender		Region	
		Boys	Girls	Urban	Rural
North Sumatera	0.08	0.08	0.08	0.09	0.08
	(0.27)	(0.27)	(0.27)	(0.28)	(0.27)
West Sumatera	0.04	0.04	0.04	0.04	0.04
	(0.20)	(0.19)	(0.20)	(0.20)	(0.20)
Riau	0.03	0.03	0.03	0.02	0.03
	(0.16)	(0.16)	(0.16)	(0.15)	(0.17)
Jambi	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.15)	(0.12)	(0.17)
South Sumatera	0.04	0.04	0.04	0.03	0.04
	(0.19)	(0.19)	(0.19)	(0.18)	(0.19)
Bengkulu	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.15)	(0.11)	(0.17)
Lampung	0.03	0.03	0.03	0.02	0.03
	(0.16)	(0.16)	(0.16)	(0.14)	(0.17)
Bangka-Belitung	0.01	0.01	0.01	0.01	0.01
	(0.11)	(0.12)	(0.11)	(0.12)	(0.11)
Riau Islands	0.01	0.01	0.01	0.02	0.01
	(0.10)	(0.10)	(0.10)	(0.13)	(0.07)
DKI Jakarta	0.02	0.02	0.02	0.06	-
	(0.14)	(0.14)	(0.15)	(0.23)	
West Java	0.07	0.07	0.07	0.11	0.05
	(0.26)	(0.25)	(0.26)	(0.31)	(0.22)
Central Java	0.08	0.08	0.08	0.10	0.07
	(0.27)	(0.27)	(0.27)	(0.30)	(0.26)
DIY	0.01	0.01	0.01	0.01	0.01
	(0.09)	(0.09)	(0.09)	(0.11)	(0.08)
East Java	0.08	0.08	0.08	0.10	0.07
	(0.27)	(0.27)	(0.27)	(0.30)	(0.25)
Banten	0.02	0.02	0.02	0.03	0.02
	(0.14)	(0.14)	(0.14)	(0.16)	(0.13)
Bali	0.02	0.02	0.02	0.02	0.02
	(0.13)	(0.13)	(0.13)	(0.14)	(0.12)
West Nusa Tenggara	0.02	0.02	0.02	0.02	0.02
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
East Nusa Tenggara	0.04	0.04	0.04	0.02	0.05
	(0.20)	(0.20)	(0.19)	(0.14)	(0.22)
West Kalimantan	0.03	0.03	0.03	0.02	0.04
	(0.17)	(0.17)	(0.18)	(0.15)	(0.19)
Central Kalimantan	0.03	0.03	0.03	0.02	0.04
	(0.18)	(0.18)	(0.18)	(0.14)	(0.20)
South Kalimantan	0.02	0.02	0.02	0.02	0.03
	(0.16)	(0.16)	(0.15)	(0.14)	(0.16)
East Kalimantan	0.03	0.03	0.03	0.04	0.02
	(0.16)	(0.16)	(0.16)	(0.19)	(0.14)
North Sulawesi	0.02	0.02	0.02	0.02	0.02
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Central Sulawesi	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.14)	(0.11)	(0.17)
South Sulawesi	0.07	0.07	0.07	0.05	0.08
	(0.25)	(0.26)	(0.25)	(0.22)	(0.27)
Southeast Sulawesi	0.03	0.03	0.03	0.02	0.03
	(0.17)	(0.17)	(0.17)	(0.14)	(0.18)
Gorontalo	0.01	0.01	0.01	0.01	0.01
	(0.10)	(0.10)	(0.10)	(0.09)	(0.11)
West Sulawesi	-	-	-	-	-

Table 3A-2: Descriptive Statistics, SUSENAS 2005 (*continued*).

	All	Gender		Region	
		Boys	**Girls**	**Urban**	**Rural**
Maluku	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.13)	(0.13)	(0.10)	(0.14)
North Maluku	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.13)	(0.13)	(0.11)	(0.14)
West Papua	-	-	-	-	-
Papua	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.14)	(0.13	(0.10)	(0.15)
Number of Observations	155,660	82,639	73,021	54,816	100,844

Notes: Standard deviations are reported in brackets.

Table 3A-3: Descriptive Statistics, SUSENAS 2007.

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Activity					
Working	0.13	0.16	0.10	0.07	0.16
	(0.34)	(0.37)	(0.29)	(0.26)	(0.37)
Child Characteristics					
Age	13.27	13.34	13.18	13.42	13.19
	(2.28)	(0.30)	(2.26)	(2.30)	(2.26)
Girls	0.46	-	-	0.47	0.45
	(0.50)			(0.50)	(0.50)
Biological Child	0.92	0.92	0.91	0.91	0.92
	(0.27)	(0.26)	(0.28)	(0.29)	(0.27)
Household Head's Characteristics					
Age	45.46	45.55	45.34	45.67	45.34
	(9.14)	(9.16)	(9.11)	(8.55)	(9.43)
Female Headed	0.001	0.001	0.001	0.001	0.001
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)
Household Head's Education					
Not Completed Primary	0.05	0.06	0.05	0.02	0.07
	(0.23)	(0.23)	(0.22)	(0.15)	(0.26)
Completed Primary	0.50	0.51	0.49	0.34	0.58
	(0.50)	(0.50)	(0.50)	(0.47)	(0.49)
Junior Secondary	0.16	0.16	0.16	0.17	0.16
	(0.37)	(0.37)	(0.37)	(0.37)	(0.36)
Senior Secondary	0.21	0.20	0.22	0.32	0.15
	(0.41)	(0.40)	(0.41)	(0.47)	(0.36)
Tertiary Education	0.08	0.07	0.08	0.15	0.04
	(0.27)	(0.26)	(0.28)	(0.36)	(0.20)
Household Head's Employment					
Self-Employed	0.23	0.23	0.24	0.25	0.22
	(0.42)	(0.42)	(0.42)	(0.43)	(0.42)
Employer	0.40	0.41	0.39	0.20	0.51
	(0.49)	(0.49)	(0.49)	(0.40)	(0.50)
Employee	0.30	0.30	0.31	0.47	0.22
	(0.46)	(0.46)	(0.46)	(0.50)	(0.41)
Casual Worker	0.02	0.02	0.02	0.02	0.01
	(0.12)	(0.12)	(0.12)	(0.13)	(0.12)
Unpaid Worker	0.01	0.01	0.01	0.01	0.01
	(0.10)	(0.10)	(0.10)	(0.09)	(0.11)
Others	0.03	0.03	0.03	0.05	0.02
	(0.18)	(0.18)	(0.18)	(0.22)	(0.15)
Income (Rp.)					
Household Income	1.03	0.99	1.07	1.68	0.68
	(1.46)	(1.41)	(1.52)	(1.88)	(1.03)
Square of Household Income	3.20	2.99	3.44	6.35	1.52
	(19.57)	(15.02)	(23.88)	(31.47)	(7.22)
Household Characteristics					
Birth Order	2.36	2.28	2.34	2.25	2.42
	(1.22)	(1.22)	(1.21)	(1.13)	(1.26)
Number of Children	1.79	1.80	1.79	1.66	1.86
	(1.37)	(1.37)	(1.37)	(1.27)	(1.42)
Household Size	4.56	4.56	4.56	4.53	4.58
	(1.74)	(1.74)	(1.74)	(1.72)	(1.75)
Rural	0.65	0.66	0.64	-	-
	(0.48)	(0.47)	(0.48)		
Province					
NAD	0.05	0.05	0.05	0.03	0.06
	(0.21)	(0.21)	(0.22)	(0.18)	(0.23)

Table 3A-3: Descriptive Statistics, SUSENAS 2007 (*continued*).

	All	Gender		Region	
		Boys	Girls	Urban	Rural
North Sumatera	0.08	0.08	0.08	0.09	0.08
	(0.27)	(0.27)	(0.27)	(0.28)	(0.26)
West Sumatera	0.04	0.04	0.04	0.04	0.04
	(0.20)	(0.20)	(0.21)	(0.19)	(0.21)
Riau	0.03	0.03	0.03	0.02	0.03
	(0.16)	(0.16)	(0.16)	(0.15)	(0.17)
Jambi	0.02	0.02	0.02	0.02	0.03
	(0.15)	(0.15)	(0.15)	(0.12)	(0.16)
South Sumatera	0.03	0.03	0.03	0.03	0.04
	(0.18)	(0.18)	(0.18)	(0.17)	(0.19)
Bengkulu	0.02	0.02	0.02	0.01	0.03
	(0.14)	(0.14)	(0.14)	(0.12)	(0.16)
Lampung	0.02	0.03	0.02	0.02	0.03
	(0.16)	(0.16)	(0.15)	(0.14)	(0.17)
Bangka-Belitung	0.01	0.01	0.01	0.01	0.01
	(0.11)	(0.11)	(0.11)	(0.12)	(0.10)
Riau Islands	0.01	0.01	0.01	0.02	0.01
	(0.11)	(0.11)	(0.11)	(0.15)	(0.08)
DKI Jakarta	0.02	0.02	0.02	0.06	-
	(0.14)	(0.13)	(0.15)	(0.23)	
West Java	0.07	0.07	0.07	0.11	0.05
	(0.26)	(0.26)	(0.26)	(0.31)	(0.22)
Central Java	0.08	0.08	0.08	0.10	0.06
	(0.27)	(0.27)	(0.26)	(0.30)	(0.24)
DIY	0.01	0.01	0.01	0.01	0.001
	(0.08)	(0.08)	(0.08)	(0.10)	(0.07)
East Java	0.08	0.08	0.08	0.10	0.06
	(0.27)	(0.26)	(0.27)	(0.30)	(0.24)
Banten	0.02	0.02	0.02	0.03	0.02
	(0.14)	(0.14)	(0.14)	(0.16)	(0.13)
Bali	0.02	0.02	0.01	0.02	0.01
	(0.12)	(0.12)	(0.12)	(0.14)	(0.11)
West Nusa Tenggara	0.02	0.02	0.02	0.02	0.02
	(0.14)	(0.14)	(0.14)	(0.14)	(0.13)
East Nusa Tenggara	0.04	0.04	0.04	0.02	0.06
	(0.20)	(0.21)	(0.20)	(0.14)	(0.23)
West Kalimantan	0.03	0.03	0.03	0.02	0.04
	(0.17)	(0.17)	(0.17)	(0.14)	(0.19)
Central Kalimantan	0.03	0.03	0.03	0.02	0.04
	(0.17)	(0.18)	(0.17)	(0.14)	(0.19)
South Kalimantan	0.03	0.03	0.03	0.02	0.03
	(0.16)	(0.16)	(0.16)	(0.14)	(0.16)
East Kalimantan	0.03	0.03	0.03	0.04	0.02
	(0.16)	(0.16)	(0.16)	(0.19)	(0.15)
North Sulawesi	0.02	0.02	0.02	0.02	0.03
	(0.15)	(0.15)	(0.15)	(0.13)	(0.16)
Central Sulawesi	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.14)	(0.11)	(0.16)
South Sulawesi	0.05	0.05	0.05	0.04	0.06
	(0.22)	(0.23)	(0.22)	(0.19)	(0.24)
Southeast Sulawesi	0.33	0.03	0.02	0.02	0.03
	(0.16)	(0.17)	(0.16)	(0.12)	(0.18)
Gorontalo	0.01	0.01	0.01	0.01	0.02
	(0.12)	(0.12)	(0.12)	(0.10)	(0.13)
West Sulawesi	0.01	0.01	0.01	0.01	0.02
	(0.11)	(0.11)	(0.11)	(0.08)	(0.12)

Table 3A-3: Descriptive Statistics, SUSENAS 2007 (*continued*).

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Maluku	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.13)	(0.13)	(0.11)	(0.14)
North Maluku	0.02	0.02	0.01	0.01	0.02
	(0.12)	(0.12)	(0.12)	(0.09)	(0.14)
West Papua	0.01	0.01	0.01	0.01	0.01
	(0.10)	(0.09)	(0.10)	(0.09)	(0.10)
Papua	0.02	0.02	0.02	0.01	0.03
	(0.14)	(0.14)	(0.15)	(0.11)	(0.16)
Number of Observations	156,248	85,026	71,222	54,188	102,060

Notes: Standard deviations are reported in brackets.

APPENDIX 3-B

Table 3-B1: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2005.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Age Groups					
10 to 12 years	-0.0584*	-0.0722*	-0.0430*	-0.0325*	-0.0743*
	(0.0015)	(0.0022)	(0.0019)	(0.0017)	(0.0021)
15 to 17 years	0.0961*	0.1160*	0.0722*	0.0548*	0.1197*
	(0.0021)	(0.0031)	(0.0027)	(0.0027)	(0.0029)
Child Characteristics					
Girls	-0.0299*	-	-	-0.0065*	-0.0474*
	(0.0010)			(0.0011)	(0.0016)
Biological Child	-0.0696*	-0.0368*	-0.0931*	-0.0970*	-0.0341*
	(0.0035)	(0.0045)	(0.0050)	(0.0053)	(0.0043)
Household Head's Characteristics					
Age	-0.0003*	0.00005	-0.0005*	-0.0005*	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0158	0.0081	0.0250	0.0351**	-0.0185
	(0.0189)	(0.0261)	(0.0267)	(0.0250)	(0.0212)
Household Head's Education					
Completed Primary	-0.0336*	-0.0383*	-0.0286*	-0.0129*	-0.0451*
	(0.0019)	(0.0029)	(0.0023)	(0.0023)	(0.0028)
Junior Secondary	-0.0494*	-0.0603*	-0.0376*	-0.0247*	-0.0637*
	(0.0012)	(0.0018)	(0.0014)	(0.0015)	(0.0017)
Senior Secondary	-0.0627*	-0.0780*	-0.0465*	-0.0410*	-0.0722*
	(0.0012)	(0.0018)	(0.0015)	(0.0022)	(0.0015)
Tertiary Education	-0.0512*	-0.0713*	-0.0340*	-0.0273*	-0.0689*
	(0.0010)	(0.0013)	(0.0013)	(0.0013)	(0.0014)
Household Head's Employment					
Employer	0.0362*	0.0477*	0.0225*	0.0106*	0.0482*
	(0.0016)	(0.0025)	(0.0020)	(0.0020)	(0.0021)
Employee	-0.0051*	-0.0039	-0.0054*	-0.0060*	-0.0010
	(0.0016)	(0.0026)	(0.0020)	(0.0014)	(0.0028)
Casual Worker	0.0194*	0.0280*	0.0109*	0.0080*	0.0273*
	(0.0027)	(0.0042)	(0.0032)	(0.0027)	(0.0040)
Unpaid Worker	0.0585*	0.0723*	0.0438*	0.0086	0.0856*
	(0.0103)	(0.0162)	(0.0124)	(0.0092)	(0.0147)
Others	0.0187*	0.0252*	0.0116*	0.0033	0.0350*
	(0.0036)	(0.0057)	(0.0044)	(0.0028)	(0.0064)
Household Characteristics					
Birth Order	0.0177*	0.0242*	0.0110*	0.0088*	0.0238*
	(0.0011)	(0.0018)	(0.0014)	(0.0013)	(0.0017)
Number of Children	-0.0024***	-0.0039**	-0.0007	-0.0018	-0.0028
	(0.0012)	(0.0019)	(0.0014)	(0.0013)	(0.0018)
Household Size	-0.0045*	-0.0067*	-0.0021*	-0.0008	-0.0076*
	(0.0005)	(0.0008)	(0.0006)	(0.0005)	(0.0008)
Rural	0.0229*	0.0326*	0.0134*	-	-
	(0.0012)	(0.0019)	(0.0015)		
Province					
NAD	-0.0409*	-0.0427*	-0.0355*	-0.00014	-0.0580*
	(0.0016)	(0.0032)	(0.0014)	(0.0076)	(0.0022)
North Sumatera	-0.0079**	0.0040	-0.0152*	0.0189**	-0.0080
	(0.0034)	(0.0063)	(0.0031)	(0.0115)	(0.0049)
West Sumatera	-0.0339*	-0.0291*	-0.0329*	0.0084	-0.0489*
	(0.0021)	(0.0045)	(0.0016)	(0.0099)	(0.0029)

Table 3-B1: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Riau	-0.0393*	-0.0413*	-0.0340*	0.0022	-0.0561*
	(0.0017)	(0.0035)	(0.0015)	(0.0089)	(0.0024)
Jambi	-0.0335*	-0.0352*	-0.0291*	0.0123	-0.0489*
	(0.0022)	(0.0041)	(0.0020)	(0.0121)	(0.0029)
South Sumatera	-0.0355*	-0.0339*	-0.0330*	0.0087	-0.0517*
	(0.0019)	(0.0039)	(0.0016)	(0.0101)	(0.0025)
Bengkulu	-0.0371*	-0.0344*	-0.0346*	0.0090	-0.0539*
	(0.0019)	(0.0042)	(0.0014)	(0.0120)	(0.0025)
Lampung	-0.0295*	-0.0232*	-0.0307*	0.0207***	-0.0448*
	(0.0024)	(0.0051)	(0.0018)	(0.0136)	(0.0031)
Bangka Belitung	-0.0089***	0.0169***	-0.0238*	0.0335*	-0.0140**
	(0.0045)	(0.0096)	(0.0030)	(0.0168)	(0.0065)
Riau Islands	-0.0242*	-0.0170***	-0.0262*	0.0252**	-0.0421*
	(0.0039)	(0.0081)	(0.0031)	(0.0149)	(0.0057)
DKI Jakarta	-0.0148*	-0.0340*	-0.0091***	0.0297*	-
	(0.0040)	(0.0053)	(0.0044)	(0.0140)	
West Java	-0.0241*	-0.0237*	-0.0224*	0.0249**	-0.0387*
	(0.0025)	(0.0046)	(0.0025)	(0.0123)	(0.0033)
Central Java	-0.0283*	-0.0328*	-0.0227*	0.0199**	-0.0430*
	(0.0023)	(0.0039)	(0.0025)	(0.0114)	(0.0030)
DIY	-0.0368*	-0.0409*	-0.0306*	0.0140	-0.0565*
	(0.0027)	(0.0052)	(0.0024)	(0.0132)	(0.0035)
East Java	-0.0301*	-0.0260*	-0.0302*	0.0157***	-0.0441*
	(0.0022)	(0.0043)	(0.0020)	(0.0106)	(0.0030)
Banten	-0.0298*	-0.0356*	-0.0241*	0.0147	-0.0441*
	(0.0026)	(0.0044)	(0.0026)	(0.0117)	(0.0036)
Bali	0.0030	0.0001	0.0037	0.0467*	0.0027
	(0.0051)	(0.0081)	(0.0059)	(0.0193)	(0.0074)
West Nusa Tenggara	-0.0264*	-0.0205*	-0.0272*	0.0251**	-0.0411*
	(0.0028)	(0.0057)	(0.0023)	(0.0144)	(0.0037)
East Nusa Tenggara	-0.0180*	-0.0104***	-0.0211*	0.0044	-0.0251*
	(0.0029)	(0.0056)	(0.0026)	(0.0094)	(0.0041)
West Kalimantan	-0.0203*	-0.0155**	-0.0220*	0.0180***	-0.0300*
	(0.0029)	(0.0055)	(0.0026)	(0.0126)	(0.0039)
Central Kalimantan	-0.0336*	-0.0350*	-0.0295*	0.0073	-0.0486*
	(0.0020)	(0.0039)	(0.0019)	(0.0102)	(0.0028)
South Kalimantan	-0.0184*	-0.0096	-0.0226*	0.0304*	-0.0299*
	(0.0032)	(0.0063)	(0.0027)	(0.0157)	(0.0042)
East Kalimantan	-0.0325*	-0.0274*	-0.0319*	0.0166***	-0.0510*
	(0.0023)	(0.0049)	(0.0017)	(0.0118)	(0.0029)
North Sulawesi	-0.0320*	-0.0260*	-0.0316*	0.0356*	-0.0526*
	(0.0026)	(0.0057)	(0.0019)	(0.0174)	(0.0031)
Central Sulawesi	-0.0205*	-0.0019	-0.0298*	0.0193***	-0.0313*
	(0.0031)	(0.0069)	(0.0020)	(0.0143)	(0.0041)
South Sulawesi	-0.0246*	-0.0062	-0.0331*	0.0212**	-0.0372*
	(0.0025)	(0.0056)	(0.0016)	(0.0125)	(0.0033)
Southeast Sulawesi	-0.0233*	-0.0109***	-0.0281*	0.0045	-0.0315*
	(0.0028)	(0.0060)	(0.0020)	(0.0095)	(0.0040)
Gorontalo	-0.0188*	-0.0005	-0.0267*	0.0250**	-0.0299*
	(0.0041)	(0.0091)	(0.0028)	(0.0164)	(0.0055)
Maluku	-0.0429*	-0.0468*	-0.0356*	-0.0094	-0.0597*
	(0.0015)	(0.0034)	(0.0013)	(0.0067)	(0.0022)
North Maluku	-0.0422*	-0.0500*	-0.0331*	-0.0085	-0.0585*
	(0.0016)	(0.0029)	(0.0016)	(0.0065)	(0.0023)

Table 3B-1: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2005 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Number of Observations[1]	155,660	82,639	73,021	54,816	100,844
Pseudo R^2	0.2305	0.2467	0.2042	0.2442	0.2203
Log Likelihood	-39524.270	-23599.623	-15497.357	-9741.653	-29404.552

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-B2: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2005.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Age Groups				
10 to 12 years	-0.0327*	-0.0279*	-0.0985*	-0.0508*
	(0.0024)	(0.0023)	(0.0034)	(0.0026)
15 to 17 years	0.0559*	0.0464*	0.1523*	0.0842*
	(0.0037)	(0.0036)	(0.0044)	(0.0037)
Child Characteristics				
Biological Child	-0.0388*	-0.1422*	-0.0244*	-0.0428*
	(0.0052)	(0.0085)	(0.0064)	(0.0057)
Household Head's Characteristics				
Age	-0.0004*	-0.0005*	0.0005*	-0.0003**
	(0.0001)	(0.0001)	(0.0002)	(0.0001)
Female Headed	0.0225	0.0526***	-0.0235	-0.0141
	(0.0260)	(0.0431)	(0.0367)	(0.0224)
Household Head's Education				
Completed Primary	-0.0114*	-0.0133*	-0.0558*	-0.0347*
	(0.0030)	(0.0032)	(0.0045)	(0.0033)
Junior Secondary	-0.0239*	-0.0218*	-0.0847*	-0.0440*
	(0.0020)	(0.0021)	(0.0029)	(0.0020)
Senior Secondary	-0.0421*	-0.0345*	-0.0969*	-0.0494*
	(0.0030)	(0.0031)	(0.0025)	(0.0018)
Tertiary Education	-0.0326*	-0.0208*	-0.0958*	-0.0449*
	(0.0018)	(0.0019)	(0.0021)	(0.0018)
Household Head's Employment				
Employer	0.0159*	0.0033	0.0665*	0.0293*
	(0.0028)	(0.0023)	(0.0034)	(0.0025)
Employee	-0.0051*	-0.0062*	0.0004	-0.0021
	(0.0019)	(0.0019)	(0.0047)	(0.0033)
Casual Worker	0.0091*	0.0066**	0.0418*	0.0136*
	(0.0035)	(0.0036)	(0.0065)	(0.0046)
Unpaid Worker	0.0170	-0.0003	0.1064*	0.0628*
	(0.0141)	(0.0103)	(0.0234)	(0.0170)
Others	0.0077**	-0.0012	0.0415*	0.0265*
	(0.0041)	(0.0033)	(0.0098)	(0.0079)
Household Characteristics				
Birth Order	0.0102*	0.0060*	0.0335*	0.0143*
	(0.0017)	(0.0017)	(0.0028)	(0.0019)
Number of Children	-0.0019	-0.0012	-0.0051***	-0.0008
	(0.0017)	(0.0018)	(0.0030)	(0.0020)
Household Size	-0.0013**	-0.0001	-0.0112*	-0.0040*
	(0.0006)	(0.0007)	(0.0013)	(0.0010)
Province				
NAD	-0.0109	0.0275	-0.0638*	-0.0467*
	(0.0056)	(0.0273)	(0.0050)	(0.0017)
North Sumatera	0.0042	0.0531**	0.0095	-0.0181*
	(0.0098)	(0.0339)	(0.0095)	(0.0041)
West Sumatera	-0.0028	0.0403***	-0.0453*	-0.0433*
	(0.0082)	(0.0315)	(0.0068)	(0.0020)
Riau	-0.0156**	0.0721*	-0.0576*	-0.0463*
	(0.0039)	(0.0452)	(0.0059)	(0.0016)
Jambi	-0.0103	0.0941*	-0.0515*	-0.0405*
	(0.0062)	(0.0541)	(0.0064)	(0.0022)
South Sumatera	-0.0035	0.0390***	-0.0532*	-0.0435*
	(0.0080)	(0.0318)	(0.0058)	(0.0019)
Bengkulu	-0.0021	0.0385	-0.0527*	-0.0457*
	(0.0102)	(0.0356)	(0.0063)	(0.0016)

Table 3-B2: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Lampung	-0.0009	0.0763*	-0.0349*	-0.0427*
	(0.0096)	(0.0465)	(0.0076)	(0.0019)
Bangka Belitung	0.0146	0.0687**	0.0272**	-0.0327*
	(0.0147)	(0.0452)	(0.0148)	(0.0037)
Riau Islands	0.0050	0.0777*	-0.0369**	-0.0384*
	(0.0117)	(0.0480)	(0.0129)	(0.0038)
DKI Jakarta	-0.0085	0.1311*	-	-
	(0.0063)	(0.0577)		
West Java	-0.0005	0.0929*	-0.0384*	-0.0341*
	(0.0085)	(0.0447)	(0.0068)	(0.0028)
Central Java	-0.0072	0.0998*	-0.0478*	-0.0349*
	(0.0067)	(0.0470)	(0.0059)	(0.0027)
DIY	-0.0069	0.0808*	-0.0654*	-0.0432*
	(0.0080)	(0.0516)	(0.0084)	(0.0023)
East Java	-0.0043	0.0685*	-0.0373*	-0.0418*
	(0.0075)	(0.0379)	(0.0066)	(0.0022)
Banten	-0.0094	0.0879*	-0.0513*	-0.0347*
	(0.0062)	(0.0489)	(0.0073)	(0.0031)
Bali	0.0125	0.1371*	-0.0035	0.0035
	(0.0140)	(0.0648)	(0.0121)	(0.0079)
West Nusa Tenggara	0.0005	0.0977*	-0.0327*	-0.0391*
	(0.0097)	(0.0535)	(0.0087)	(0.0024)
East Nusa Tenggara	0.0010	0.0165	-0.0154***	-0.0278*
	(0.0100)	(0.0228)	(0.0081)	(0.0033)
West Kalimantan	-0.0036	0.0811*	-0.0213**	-0.0315*
	(0.0083)	(0.0474)	(0.0082)	(0.0030)
Central Kalimantan	-0.0090	0.0575**	-0.0516*	-0.0403*
	(0.0065)	(0.0397)	(0.0060)	(0.0022)
South Kalimantan	0.0096	0.0819*	-0.0179***	-0.0325*
	(0.0127)	(0.0485)	(0.0090)	(0.0031)
East Kalimantan	-0.0004	0.0614**	-0.0464*	-0.0446*
	(0.0089)	(0.0396)	(0.0074)	(0.0018)
North Sulawesi	0.0129	0.0979*	-0.0509*	-0.0446*
	(0.0143)	(0.0552)	(0.0077)	(0.0019)
Central Sulawesi	0.0067	0.0598**	-0.0044	-0.0405*
	(0.0131)	(0.0434)	(0.0098)	(0.0023)
South Sulawesi	0.0067	0.0529**	-0.0114	-0.0451*
	(0.0108)	(0.0356)	(0.0080)	(0.0020)
Southeast Sulawesi	-0.0077	0.0404***	-0.0117	-0.0369*
	(0.0070)	(0.0333)	(0.0092)	(0.0026)
Gorontalo	0.0110	0.0685**	-0.0052	-0.0367*
	(0.0155)	(0.0479)	(0.0132)	(0.0032)
Maluku	-0.0112	-0.0012	-0.0703*	-0.0452*
	(0.0067)	(0.0165)	(0.0053)	(0.0017)
North Maluku	-0.0205*	0.0512**	-0.0705*	-0.0439*
	(0.0020)	(0.0396)	(0.0052)	(0.0018)
Number of Observations[1]	28,284	26,532	54,355	46,489
Pseudo R^2	0.2627	0.2575	0.2234	0.1944
Log Likelihood	-5220.373	-4300.140	-18284.999	-10938.015

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-B3: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2007.

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Age Groups					
10 to 12 years	-0.0740*	-0.0930*	-0.0520*	-0.0388*	-0.0961*
	(0.0017)	(0.0026)	(0.0023)	(0.0021)	(0.0025)
15 to 17 years	0.1050*	0.1229*	0.0810*	0.0566*	0.1320*
	(0.0023)	(0.0033)	(0.0030)	(0.0028)	(0.0032)
Child Characteristics					
Girls	-0.0408*	-	-	-0.0038*	-0.0680*
	(0.0013)			(0.0015)	(0.0019)
Biological Child	-0.0672*	-0.0347*	-0.0882*	-0.1035*	-0.0312*
	(0.0034)	(0.0046)	(0.0046)	(0.0051)	(0.0043)
Household Head's Characteristics					
Age	-0.0003*	-0.0001	-0.0006*	-0.0007*	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.0199	-0.0253	-0.0171	-0.0153	-0.0189
	(0.0213)	(0.0320)	(0.0264)	(0.0196)	(0.0337)
Household Head's Education					
Completed Primary	-0.0406*	-0.0466*	-0.0340*	-0.0235*	-0.0501*
	(0.0026)	(0.0039)	(0.0033)	(0.0034)	(0.0037)
Junior Secondary	-0.0581*	-0.0715*	-0.0426*	-0.0337*	-0.0734*
	(0.0018)	(0.0028)	(0.0023)	(0.0023)	(0.0027)
Senior Secondary	-0.0771*	-0.0973*	-0.0548*	-0.0530*	-0.0910*
	(0.0018)	(0.0026)	(0.0023)	(0.0030)	(0.0024)
Tertiary Education	-0.0681*	-0.0969*	-0.0415*	-0.0392*	-0.0948*
	(0.0015)	(0.0019)	(0.0023)	(0.0019)	(0.0022)
Household Head's Employment					
Employer	0.0668*	0.0860*	0.0438*	0.0413*	0.0791*
	(0.0021)	(0.0031)	(0.0027)	(0.0032)	(0.0027)
Employee	0.0020	0.0059***	-0.0022	-0.0019	0.0090**
	(0.0022)	(0.0034)	(0.0027)	(0.0020)	(0.0036)
Casual Worker	0.0354*	0.0541*	0.0170**	0.0102***	0.0550*
	(0.0074)	(0.0116)	(0.0087)	(0.0067)	(0.0116)
Unpaid Worker	0.0830*	0.0996*	0.0647*	0.0497*	0.1010*
	(0.0097)	(0.0145)	(0.0124)	(0.0151)	(0.0127)
Others	0.0348*	0.0424*	0.0273*	0.0086**	0.0622*
	(0.0053)	(0.0081)	(0.0066)	(0.0044)	(0.0092)
Household Characteristics					
Birth Order	0.0203*	0.0279*	0.0118*	0.0093*	0.0278*
	(0.0014)	(0.0021)	(0.0016)	(0.0016)	(0.0020)
Number of Children	0.0025***	0.0008	0.0039**	0.0041**	0.0002
	(0.0014)	(0.0022)	(0.0017)	(0.0016)	(0.0021)
Household Size	-0.0092*	-0.0117*	-0.0061*	-0.0050*	-0.0119*
	(0.0007)	(0.0010)	(0.0008)	(0.0007)	(0.0010)
Rural	0.0410*	0.0581*	0.0230*	-	-
	(0.0015)	(0.0023)	(0.0020)		
Province					
NAD	-0.0640*	-0.0667*	-0.0554*	-0.0209*	-0.0905*
	(0.0020)	(0.0040)	(0.0017)	(0.0052)	(0.0028)
North Sumatera	0.0212*	0.0341*	0.0096***	0.0185***	0.0383*
	(0.0054)	(0.0090)	(0.0059)	(0.0110)	(0.0078)
West Sumatera	-0.0438*	-0.0367*	-0.0436*	0.0100	-0.0681*
	(0.0031)	(0.0061)	(0.0027)	(0.0105)	(0.0040)
Riau	-0.0485*	-0.0380*	-0.0500*	0.0042	-0.0736*
	(0.0030)	(0.0064)	(0.0022)	(0.0103)	(0.0040)

Table 3-B3: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
Jambi	-0.0501*	-0.0419*	-0.0500*	0.0229**	-0.0791*
	(0.0029)	(0.0062)	(0.0022)	(0.0138)	(0.0036)
South Sumatera	-0.0355*	-0.0264*	-0.0382*	0.0118	-0.0556*
	(0.0035)	(0.0067)	(0.0031)	(0.0111)	(0.0047)
Bengkulu	-0.0453*	-0.0354*	-0.0468*	0.0136	-0.0695*
	(0.0033)	(0.0068)	(0.0025)	(0.0128)	(0.0042)
Lampung	-0.0091***	0.0192**	-0.0307*	0.0274**	-0.0215*
	(0.0051)	(0.0097)	(0.0041)	(0.0143)	(0.0067)
Bangka Belitung	0.0166**	0.0592*	-0.0156**	0.0370*	0.0198***
	(0.0078)	(0.0145)	(0.0067)	(0.0166)	(0.0113)
Riau Islands	-0.0443*	-0.0396*	-0.0428*	-0.0017	-0.0675*
	(0.0044)	(0.0084)	(0.0038)	(0.0092)	(0.0071)
DKI Jakarta	-0.0170*	-0.0484*	-0.0089	0.0167***	-
	(0.0057)	(0.0076)	(0.0062)	(0.0110)	
West Java	-0.0495*	-0.0603*	-0.0375*	0.0039	-0.0811*
	(0.0028)	(0.0044)	(0.0031)	(0.0088)	(0.0033)
Central Java	-0.0441*	-0.0472*	-0.0374*	0.0069	-0.0702*
	(0.0030)	(0.0051)	(0.0031)	(0.0092)	(0.0038)
DIY	-0.0073	-0.0093	-0.0044	0.0293**	-0.0180
	(0.0084)	(0.0130)	(0.0100)	(0.0177)	(0.0121)
East Java	-0.0396*	-0.0354*	-0.0392*	0.0030	-0.0587*
	(0.0031)	(0.0057)	(0.0030)	(0.0087)	(0.0043)
Banten	-0.0583*	-0.0717*	-0.0435*	-0.0042	-0.0900*
	(0.0026)	(0.0041)	(0.0030)	(0.0084)	(0.0031)
Bali	0.0783*	0.0636*	0.0885*	0.0974*	0.0959*
	(0.0101)	(0.0140)	(0.0137)	(0.0237)	(0.0141)
West Nusa Tenggara	-0.0090	-0.0089	-0.0073	0.0255**	-0.0184**
	(0.0055)	(0.0090)	(0.0063)	(0.0138)	(0.0077)
East Nusa Tenggara	-0.0136*	-0.0031	-0.0197*	-0.0086	-0.0170*
	(0.0044)	(0.0076)	(0.0044)	(0.0079)	(0.0060)
West Kalimantan	-0.0269*	-0.0178**	-0.0304*	0.0066	-0.0399*
	(0.0039)	(0.0072)	(0.0037)	(0.0107)	(0.0054)
Central Kalimantan	-0.0177*	-0.0016	-0.0276*	0.0383*	-0.0358*
	(0.0045)	(0.0083)	(0.0041)	(0.0159)	(0.0057)
South Kalimantan	-0.0181*	-0.0130	-0.0201*	0.0227**	-0.0318*
	(0.0046)	(0.0079)	(0.0049)	(0.0134)	(0.0062)
East Kalimantan	-0.0586*	-0.0582*	-0.0524*	-0.0163**	-0.0833*
	(0.0025)	(0.0050)	(0.0020)	(0.0060)	(0.0035)
North Sulawesi	-0.0346*	-0.0060	-0.0492*	0.0169	-0.0559*
	(0.0041)	(0.0089)	(0.0025)	(0.0131)	(0.0053)
Central Sulawesi	0.0088	0.0641*	-0.0309*	0.0435*	0.0014
	(0.0062)	(0.0123)	(0.0043)	(0.0187)	(0.0078)
South Sulawesi	0.0043	0.0525*	-0.0304*	0.0245**	0.0031
	(0.0050)	(0.0100)	(0.0036)	(0.0127)	(0.0068)
Southeast Sulawesi	0.0374*	0.0930*	-0.0082	0.0254**	0.0466*
	(0.0070)	(0.0129)	(0.0060)	(0.0146)	(0.0092)
Gorontalo	-0.0109***	0.0227**	-0.0314*	-0.0033	-0.0138
	(0.0058)	(0.0115)	(0.0045)	(0.0104)	(0.0081)
West Sulawesi	-0.0102	0.0272**	-0.0348*	-0.0074	-0.0130
	(0.0060)	(0.0119)	(0.0045)	(0.0101)	(0.0084)
Maluku	-0.0344*	-0.0300*	-0.0332*	-0.0058	-0.0490*
	(0.0043)	(0.0079)	(0.0042)	(0.0094)	(0.0060)
North Maluku	-0.0260*	-0.0144	-0.0307*	0.0420*	-0.0461*
	(0.0049)	(0.0092)	(0.0046)	(0.0192)	(0.0062)

Table 3-B3: Marginal Effects of Probit Estimation of Work Choices of All Children, SUSENAS 2007 (*continued*).

Variables	All	Gender		Region	
		Boys	Girls	Urban	Rural
West Papua	-0.0414*	-0.0437*	-0.0353*	-0.0221**	
	(0.0046)	(0.0083)	(0.0046)	(0.0070)	-0.0527*
					(0.0070)
Number of Observations[1]	156,248	85,026	71,222	54,188	102,060
Pseudo R^2	0.2143	0.2360	0.1819	0.1990	0.2070
Log Likelihood	-47397.248	-28418.565	-18348.046	-11041.770	-35782.521

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

Table 3-B4: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2007.

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Age Groups				
10 to 12 years	-0.0409*	-0.0333*	-0.1267*	-0.0621*
	(0.0028)	(0.0030)	(0.0038)	(0.0031)
15 to 17 years	0.0565*	0.0504*	0.1629*	0.0951*
	(0.0038)	(0.0038)	(0.0047)	(0.0042)
Child Characteristics				
Biological Child	-0.0440*	-0.1525*	-0.0217*	-0.0383*
	(0.0055)	(0.0080)	(0.0065)	(0.0055)
Household Head's Characteristics				
Age	-0.0006*	-0.0007*	0.0005**	-0.0003**
	(0.0001)	(0.0001)	(0.0002)	(0.0001)
Female Headed	-0.0064	-0.0053	-0.0557	-0.0048
	(0.0265)	(0.0124)	(0.0378)	(0.0430)
Household Head's Education				
Completed Primary	-0.0268*	-0.0178*	-0.0590*	-0.0398*
	(0.0042)	(0.0056)	(0.0058)	(0.0045)
Junior Secondary	-0.0362*	-0.0270*	-0.0961*	-0.0492*
	(0.0027)	(0.0039)	(0.0044)	(0.0032)
Senior Secondary	-0.0608*	-0.0392*	-0.1206*	-0.0603*
	(0.0038)	(0.0049)	(0.0039)	(0.0029)
Tertiary Education	-0.0477*	-0.0265*	-0.1325*	-0.0580*
	(0.0021)	(0.0038)	(0.0032)	(0.0030)
Household Head's Employment				
Employer	0.0473*	0.0313*	0.1089*	0.0463*
	(0.0044)	(0.0043)	(0.0042)	(0.0033)
Employee	-0.0011	-0.0037	0.0161*	0.0021
	(0.0027)	(0.0029)	(0.0057)	(0.0043)
Casual Worker	0.0154***	0.0050	0.0812*	0.0253**
	(0.0094)	(0.0090)	(0.0182)	(0.0131)
Unpaid Worker	0.0625*	0.0355**	0.1237*	0.0739*
	(0.0218)	(0.0198)	(0.0191)	(0.0155)
Others	0.0180*	-0.0024	0.0634*	0.0611*
	(0.0067)	(0.0051)	(0.0134)	(0.0121)
Household Characteristics				
Birth Order	0.0087*	0.0090*	0.0408*	0.0145*
	(0.0022)	(0.0022)	(0.0031)	(0.0023)
Number of Children	0.0049**	0.0024	-0.0024	0.0025
	(0.0022)	(0.0022)	(0.0033)	(0.0024)
Household Size	-0.0044*	-0.0050*	-0.0169*	-0.0066*
	(0.0010)	(0.0010)	(0.0016)	(0.0012)
Province				
NAD	-0.0193**	-0.0247*	-0.0997*	-0.0710*
	(0.0070)	(0.0056)	(0.0061)	(0.0022)
North Sumatera	0.0116	0.0158	0.0579*	0.0203*
	(0.0134)	(0.0150)	(0.0130)	(0.0080)
West Sumatera	0.0110	-0.0014	-0.0657*	-0.0583*
	(0.0142)	(0.0120)	(0.0084)	(0.0032)
Riau	0.0032	-0.0042	-0.0627*	-0.0668*
	(0.0131)	(0.0124)	(0.0092)	(0.0025)
Jambi	0.0236	0.0053	-0.0761*	-0.0674*
	(0.0184)	(0.0154)	(0.0083)	(0.0023)
South Sumatera	0.0098	0.0013	-0.0466*	-0.0515*
	(0.0142)	(0.0130)	(0.0095)	(0.0037)
Bengkulu	0.0201	-0.0038	-0.0623*	-0.0617*
	(0.0186)	(0.0131)	(0.0093)	(0.0029)

Table 3-B4: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	Girls	Boys	Girls
Lampung	0.0134	0.0274***	0.0234***	-0.0467*
	(0.0158)	(0.0203)	(0.0135)	(0.0045)
Bangka Belitung	0.0379**	0.0213	0.0824*	-0.0226**
	(0.0222)	(0.0203)	(0.0211)	(0.0089)
Riau Islands	-0.0093	0.0004	-0.0541*	-0.0625*
	(0.0099)	(0.0136)	(0.0160)	(0.0043)
DKI Jakarta	-0.0120	0.0327**	-	-
	(0.0086)	(0.0187)		
West Java	-0.0108	0.0131	-0.0987*	-0.0579*
	(0.0088)	(0.0141)	(0.0061)	(0.0032)
Central Java	-0.0045	0.0110	-0.0777*	-0.0545*
	(0.0100)	(0.0138)	(0.0072)	(0.0035)
DIY	-0.0031	0.0583**	-0.0074	-0.0191
	(0.0145)	(0.0322)	(0.0210)	(0.0124)
East Java	-0.0054	0.0035	-0.0525*	-0.0533*
	(0.0099)	(0.0123)	(0.0085)	(0.0035)
Banten	-0.0160	0.0031	-0.1143*	-0.0623*
	(0.0080)	(0.0135)	(0.0058)	(0.0031)
Bali	0.0347**	0.1577*	0.0958*	0.0905*
	(0.0205)	(0.0436)	(0.0211)	(0.0172)
West Nusa Tenggara	0.0043	0.0412**	-0.0141	-0.0162***
	(0.0134)	(0.0235)	(0.0135)	(0.0078)
East Nusa Tenggara	-0.0092	-0.0116	-0.0026	-0.0222*
	(0.0102)	(0.0098)	(0.0109)	(0.0057)
West Kalimantan	0.0036	-0.0037	-0.0292*	-0.0393*
	(0.0133)	(0.0125)	(0.0103)	(0.0046)
Central Kalimantan	0.0328**	0.0261	-0.0158	-0.0417*
	(0.0199)	(0.0205)	(0.0112)	(0.0046)
South Kalimantan	0.0189	0.0129	-0.0293**	-0.0279*
	(0.0169)	(0.0169)	(0.0109)	(0.0060)
East Kalimantan	-0.0187**	-0.0166	-0.0854*	-0.0683*
	(0.0070)	(0.0080)	(0.0081)	(0.0023)
North Sulawesi	0.0165	0.0038	-0.0175	-0.0668*
	(0.0170)	(0.0155)	(0.0125)	(0.0026)
Central Sulawesi	0.0163*	0.0162	0.0728*	-0.0432*
	(0.0286)	(0.0204)	(0.0157)	(0.0050)
South Sulawesi	0.0300**	0.0023	0.0693*	-0.0390*
	(0.0180)	(0.0130)	(0.0135)	(0.0046)
Southeast Sulawesi	0.0255	0.0120	0.1241*	-0.0124
	(0.0193)	(0.0178)	(0.0167)	(0.0074)
Gorontalo	-0.0042	-0.0090	0.0366**	-0.0398*
	(0.0137)	(0.0119)	(0.0164)	(0.0058)
West Sulawesi	0.0102	-0.0317*	0.0358**	-0.0401*
	(0.0179)	(0.0034)	(0.0165)	(0.0062)
Maluku	0.0033	-0.0189	-0.0510*	-0.0396*
	(0.0150)	(0.0083)	(0.0111)	(0.0056)
North Maluku	0.0355***	0.0389***	-0.0336**	-0.0454*
	(0.0242)	(0.0271)	(0.0124)	(0.0050)
West Papua	-0.0199	-0.0250**	-0.0597*	-0.0409*
	(0.0104)	(0.0069)	(0.0129)	(0.0064)

Table 3-B4: Marginal Effects of Probit Estimation of Work Choices of All Children by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban		Rural	
	Boys	**Girls**	**Boys**	**Girls**
Number of Observations[1]	28,590	25,598	56,436	45,624
Pseudo R^2	0.2112	0.2189	0.2127	0.1765
Log Likelihood	-5897.311	-4924.467	-22361.414	-13117.096

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

[1] Those children reported worked as one of their activity during the survey.

CHAPTER 4: ANALYSIS OF CHILD LABOUR AND CHILD SCHOOLING IN INDONESIA.

4.1 Introduction

In general, high incidence of child labour in most developing countries has a direct relation to poverty, which forces children either to drop out of school or combine work and school. Scientists say that the main reason for a child to work is to earn income. For that purpose, many children have dropped out of primary school and started to work in both urban and rural areas. Child labour and low school attendance rates are a general problem all over the world, especially in developing countries (Elijah and Okoruwa, 2007). This especially occurs in rural areas, where the capacity to impose minimum age requirements for working and schooling is lacking. The relationships between child labour and school participation vary according to the previous literature. Some studies find that working is negatively associated with school participation for children (see, for example, Canagarajah and Coulombe, 1997; Ray, 2000; Priyambada et al. 2005) but other studies confirm that both working and attending school are compatible (Heady, 2003; Admassie and Bedi, 2003; Hoop and Rosati, 2012). This is due to the additional incomes generated by participation of children (Heady, 2003; Kruger and Berthelon, 2007). These work activities may take place after school hours or more intensively, during weekend or school holidays, which are more probably foreseeable in rural areas (Canagarajah and Coulombe, 1997). Particularly, as found by Heady (2003) among working children in Ghana, boys who spent less than 10 hours per week work in farm or non-farm activities (for a family member) are more likely to go to school than those who did not work at all. However, girls who work for a family member have a lower

probability of attending school. Nevertheless, child labour remains unfavourable for the accumulation of the human capital (Koissy-Kpein, 2013).

Due to financial constraints, children are left with little choice but to get involved in economic activities for not only to help their poor families, but also to satisfy their own basic needs. In particular, the opportunity for women to work in rural areas results in children being pulled out of school to stay at home and do household chores and look after their younger siblings. This phenomenon does not reflect selfishness of parents aiming to have more leisure time while their children work. Poverty forces them to send their children to work (Basu and Van, 1998). For poor households, the decision to send children to school is associated with a host of decisions related to the use of time and other resources.

Besides the impact on the physical and mental state of the working child, engaging in work for long hours prevents human capital formation by leaving children with little time to focus on education. However, the choice between sending children to school or work is usually made by the parents. In this case, children go to school, parents lose current income but gain through higher future potential income. On the other hand, if they send their children to work, they obtain current income but they will suffer with lower potential future income by preventing human capital formation of their children. As noted by Chamarbagwala (2008), low economic returns to basic education are driven by an inferior quality of education provided by public schools. In Indonesia, the quality of schooling is low and declining where students have not been produced with the knowledge and skills needed to build a strong society and competitive economy for the future. Instead of shortage on teacher preparation and attendance, schools are not regularly maintained. According to survey data from the Ministry of National Education

(MoNE, 1999), one in six schools in Central Java is in bad condition. In addition, at least one in two schools in East Nusa Tenggara did not provide the basics instruction, such as textbooks, a blackboard, experienced teacher and writing supplies. As a result, parents may undermine the value of education. Since parents believe that education is worthless, this reinforces them to assume that their children are better off learning skills at work, doing household chores, or being idle rather than going to school.

According to Grootaert (1998), childhood is the best time for obtaining knowledge from the formal education system if schooling is considered as an investment in human capital that yields a return in the labour market. Therefore, it is normal to see schooling as the preferred alternative to child labour. However, the opportunity costs of schooling increases when children face favourable work conditions (Duryea and Arends-Kuenning, 2003). There is enormous amount of literature that has focused on credit constraints and poverty as the main determinants of child labour and schooling (Basu and Van, 1998; Ranjan, 1999). Thus, it is important to understand the joint participation behaviour of the household in their decision-making of sending their children to school and/or to work. The aim of this chapter is to analyse the determinants of child labour in conjunction with schooling decision of Indonesian children aged from 10-17 years old. In particular, we examine if the spouse of household head characteristics and the presence of siblings (in groups of age) has an effect on school attendance and on working besides the role of the household head. Land ownership is also introduced as an important determinant to investigate the effect of different types of landownerships on school attendance and working.

The market work opportunities are more available for boys compared to girls. In other words, boys are better off than girls to be hired in the labour market. Consequently,

boys may face higher opportunity costs of schooling than girls. Thus, the impact for girls and for boys is examined separately. In addition, children living in rural households may be prone to working and less likely to attend school compared to children from urban households. Therefore, we also examine the outcome in urban and rural areas, separately. Urban-rural residency is differentially associated with boys' and girls' work and school responsibilities. Finally, we include separate estimates for children with the age of 10-14 years and 15-17 years. This is to investigate the effects of the implementation of the Compulsory Nine-year Basic Education Program and the minimum age of 15 years to engage in the labour market on the probability of schooling and working.

This chapter proceeds as follows: Section 4.2 discusses the system of education in Indonesia. Section 4.3 gives a brief review of the related literature. The data and methodology are discussed in Section 4.4 and Section 4.5, respectively. Section 4.6 presents the results and Section 4.7 presents the robustness checks and other model specifications, while Section 4.8 concludes the chapter with our main findings.

4.2 Background Information of Education in Indonesia

The Ministry of National Education (MoNE) and the Ministry of Religious Affairs (MoRA) are two ministries that are responsible for managing the education system in Indonesia. For that purpose, 84% of schools are accountable under MoNE and the remaining 16% under MoRA. Known as the third largest education system in the Asian region and the fourth largest in the world, the Government of Indonesia has developed more than 250,000 schools, which accommodate 50 million students and 2.6 million

teachers[1]. Under normal circumstances, the starting age for primary school is 7 years old. However, some children start at 6 years old. Children graduate from senior secondary school when they are 18 years old. There are both public and private schools that follow the national curriculum developed by the Department of National Education. The education system in Indonesia incorporates both formal schooling and informal (also known as alternative) schooling. The formal education is divided into three levels, primary, secondary and tertiary education. Every citizen has to complete 9 years of education, which is 6 years at elementary level (primary school) and 3 years in middle education (lower secondary school). Since children start elementary level at the age of seven, they complete nine years of education at the age of sixteen. During the first two years of primary school, children are expected to attend school for three hours per day. The hours increase to five hours per day until Grade 5 (ten to eleven years old) and about 6.5 hours per day for Grade 6 and above (Hsin, 2007).

In addition, since 85% of the Indonesian population are registered as Muslim, the MoRA organized a variety of Muslim schools called the *madrasah*. These schools are known as *Madrasah Ibtidaiyah* (equivalent of primary school) and *Madrasah Tsanawiyah* (equivalent of lower secondary school). They are usually under the direction of a Muslim scholar, and are mostly located in rural areas. There are also private and public *Madrasahs*; however, the majority are private schools, and use Islamic studies as the curriculum's foundation. Other private schools are based on various religions such as Christianity, Buddhism and Hinduism. These schools follow the national curriculum with additional courses emphasizing religious studies.

[1] The World Bank: World Bank and Education in Indonesia. Retrieved May 12, 2012 from http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/0,,contentMDK:23187196~pagePK:146736~piPK:146830~theSitePK:226301,00.html

Until 2010, the net enrolment rates for primary schooling were below 60% in poor districts compared to more well off districts. Net enrolment rates for secondary schools are still low compared to other countries in Asia with 66% and 45% in Junior Secondary and Senior Secondary, respectively[2]. In terms of gender, enrolment rates are slightly higher for girls than boys. However, among 92% of primary school graduate students, only 60% of those continued junior secondary and of those who went to junior secondary, 87% went to senior secondary. Since completing 9 years of education is compulsory, the number of students who drop out of school before the 9th grade remains high. Between January and October 2010, more than 750,000 students quit elementary or junior secondary. From that figure, about 527,850 students did not finish their 6 years of education, while 241,110 quit before completing 9 years of education[3]. For those who finished 9 years of education, about 1.26 million students did not continue to senior secondary.

Every student, including those in *Madrasahs,* is required to sit a national examination called *Ujian Akhir Nasional* (UAN, National Final Examination) at the end of junior and secondary high school. Before 2001/2002, the UAN was known as *Evaluasi Belajar Akhir Nasional* (EBTANAS, National Final Phase of Study Evaluation). Additionally, third year junior and senior high school students are required to take national tests in English, Indonesian and Mathematics. The UAN test includes reading, grammar, conversation and a multiple choice vocabulary test. To pass the exams, students need to obtain a score of 40.10%, and they are allowed to repeat the test in the same year if they

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[2] *Ibid.*

[3] Asriati, T. (2011, March 1). Education Ministry Targets Reduction in Drop-out Rate. *The Jakarta Post.* Retrieved January 10, 2012 from https://www.thejakartapost.com/news/2011/01/03/education-ministry-targets-reduction-dropout-rate.html

failed. Only those students who pass the UAN exams can proceed to senior high school.

A summary of the Indonesian education system is presented as in Figure 4-1 below.

Figure 4-1: The Indonesian Education System

Age	Grade	Level	Formal Education		Vocatinal Education				Non-formal Education
		Higher Education	Islamic S3 Program	Strata 3 Program	Specialist Program 2				Open University
			Islamic S2 Program	Strata 2 Program	Specialist Program 1				
22	16		Islamic Strata 1 Program	Strata 1 Program	Diploma 4 Program	Diploma 3 Program	Diploma 2 Program	D1 Program	
21	15								
20	14								
19	13								
18	12	Secondary Education	Islamic upp. Secundary School (MA)	General Upper Secondary School (SMA)			Vocational Secondary School (SMK)		Paket C
17	11								
16	10								
15	9	Basic Education	Islamic low. Secundary School (MT)	Lower Secondary School (SMP/SLTP)					Paket B
14	8								
13	7								
12	6		Islamic Primary School (MI)	Primary School (SD)					Paket A
11	5								
10	4								
9	3								
8	2								
7	1								
6		Pre-school Education	Islamic Pre-school	Kindergarten (TK)					
5									
4									

Remarks:
Strata 1, 2, 3 (S1, S2, S3) are equivalent to Bachelor, Master, Ph.D.
Specialist programs are programs for academic and/or professional further education
Basic eduction is compulsory and free of charge
Pre-school is optional

Source: Compiled out of information from the Indonesian Education Act[4].

The education fees in Indonesia vary according to the location, institution type, and ownership. Fees for elementary school range from IDR 350,000 to IDR 500,000 (equivalent to USD 30 – USD 42) per year. For secondary education, junior high school charges IDR 750,000 to 1 million (equivalent to USD 63 to USD 84) per year, while senior high school charges between IDR 2.5 to IDR 5 million (equivalent to USD 210 - USD 420) per year[5]. For higher education level, state universities' students are charged based on the single tuition fee system and pay fees based on a subsidized cost. For example, in Faculty of Medicine of University of Indonesia, the fees for each semester are IDR 15 million (equivalent to USD 1,259). Faculty of Civil Engineering and

[4] TVETipedia: Indonesian Education System. Retrieved September, 10, 2013 from http://www.unevoc.unesco.org/tvetipedia.0.html?tx_drwiki_pi1%5Bkeyword%5D=Indonesia

[5] Osman, N. (2011). 'Is This the Final Bell for School Fees in Indonesia?'. Retrieved June 15, 2013 from http://thejakartaglobe.beritasatu.com/archive/is-this-the-final-bell-for-school-fees-in-indonesia/

Planning of Surabaya Institute of Technology charges IDR 13.4 million (equivalent to USD 1,125) for each semester. The costs for each semester in Jakarta State University are between IDR 1.9 million to IDR 4 million (equivalent to USD 160 to USD 336). However, the costs are considered quite negligible especially when compared to private universities, which charge approximately USD 4,500) for each semester (Global Indonesian Voices, 2014).

4.3 Brief Literature Review

The literature that has examined the relationship between child labour and schooling in Indonesia is very limited. Using both children's and adolescents' time diaries drawn from the Worker and Iron Status Evaluation collected from households in Central Java, Indonesia, Hsin (2007) examined gendered patterns in children's time in schooling, market and non-market work and leisure. Including children with the age of 8 to 18 years in Tobit estimations revealed that children's labour participation increases with age. In particular, a lower proportion of children with the age of 8 to 11 years are involved in market work (16% of girls and 22% of boys). For children with the age of 16 to 18 years, the proportion increased to 35% and 62% for girls and boys, respectively. Boys are found more likely to participate in market work, while girls are more likely to be involved in non-market work (domestic chores), and the gender differences are significant across all age groups. Father's education is only significant for children's market work. In addition, children with more siblings are more likely to perform market work, whereas children are more likely to be involved in non-market work if they have a greater proportion of preschool siblings. However, when market and non-market work is combined, girls are found more likely to work, which leaves them

with less leisure time. On top of that, the vast majority of children were found to be attending school, with the gender gap in schooling activities growing to 1.03 hours per day for children with the age of 16-18 years. The results also show that girls are more likely to remain enrolled in school than boys. In terms of leisure, boys spend 1 hour more per day on discretionary leisure than girls since girls devote most of their time to both work and schooling. Furthermore, the results of the Tobit regression models confirmed that parent's level of education, household income and rural residency are important factors in determining children's labour and schooling time.

Implementing Ordinary Least Square (OLS) and Instrumental Variables (IV) estimation using Indonesia Family Life Survey, 1997 and 2000, Borghans et al. (2011) investigated the impact of household income on joint probability of working and schooling behaviour among children with the age of 6 to 15 years in Indonesia. The age of the child was found to be the main factor influencing the joint probability of working and schooling, thus surpassing the influence of income on the incidence of child labour. In particular, as the children get older until they reach the legal employment age of working, there is a potential shift towards full-time work. Therefore, it is possible for the children to drop out before completing junior high school. A study by Suryadama et al. (2006), using similar data sets, looked at the causes of low secondary school enrolment in Indonesia and found that almost 7% of children dropped out of school for work due to the parent's inability to pay for education. Borghans et al. (2011) also found that a fall in income leads to a shift away from full-time schooling to combining work and school.

4.4 Data

The data used in the empirical analysis in this chapter come from the National Socioeconomic Survey (SUSENAS) of 2005 and 2007. A detailed description of the data is given in the previous chapter. Information of schooling and working are available for children with the age of 10 years and above, therefore, our sample consists of children with the age of 10-17 years as discussed in Chapter 3. Children are asked about their school participation if they are (i) never or not yet in school, (ii) currently in school, and (iii) dropped out. Information on total hours in school, whether they attend school regularly or children working full-time or part-time is not provided in the survey. In this case, we assume in school's children are reported schooling as 'in school', where the dichotomous dependent variable 'schooling' takes the value 1 if the child is currently attending school, and 0 otherwise. The second dependent variable is working, which is defined as a child who is reported to be working. The terms work is referred to individuals who are reported working during previous week, including activities such as self-employed, employer, employee, casual worker and unpaid or family worker. This is, yet again, a dichotomous variable taking the value 1 for a child who works and 0 otherwise. Those who are not reported either in school or in working are excluded from our sample. Therefore, our sample consists of 145,744 children with 76,717 boys and 69,027 girls in 2005. Our sample in 2007 comprises 151,141 children, whereas 81,860 of the sample are boys and 69,281 are girls.

As can be seen in Table 4-1(a), boys were more likely to work compared to girls over the years of the survey. Moreover, more than half of working children are found in rural areas and about 21.7% of them are located in urban areas in 2005. The proportion of children attending school (regardless of working) is still higher with more than 90% in

both years of survey. However, the proportion is lower for children attending school only.

Table 4-1(a): Proportion of Children (Aged 10–17 years) by Gender and Activities based on SUSENAS 2005 and 2007.

Category (Gender)	SUSENAS 2005			SUSENAS 2007		
	Boys	**Girls**	**Total**	**Boys**	**Girls**	**Total**
Region						
Urban	51.17	48.83	**35.77**	52.53	47.47	**34.92**
Rural	53.46	46.54	**64.23**	55.04	44.96	**65.08**
Activity						
Attending School[a]	51.72	48.28	**94.08**	52.83	47.17	**91.09**
Working[b]	65.54	34.46	**8.83**	66.50	33.50	**13.12**
Work Only[c]	66.89	33.11	**5.92**	69.84	30.16	**6.82**
School Only[d]	51.39	48.61	**91.17**	52.10	47.90	**84.79**
Work and School[e]	61.79	38.21	**2.91**	62.73	37.23	**6.82**
Total (%)	**52.64**	**47.36**		**54.16**	**45.84**	
Number of Observations	**76,717**	**69,027**	**145,744**	**81,860**	**69,281**	**151,141**

Source: Author's Calculation from SUSENAS 2005 and 2007.

Notes:

[a]The percentage of children who are currently attending school from the total number of children, regardless of other activities.

[b]The percentage of children who are reported woking from the total number of children, regardless of other activities.

[c]The percentage of children who are currently attending school only.

[d]The percentage of children who are work only.

[e]The percentage of children who are combining work and school from the total number of children who are attending school and working.

As can be seen in Table 4-1(b), the proportion of work for only children is much higher in rural areas and the proportion has slightly increased from 76.48% in 2005 to 81.57 in 2007. The proportion of work and school is also higher in rural areas, which is more than 80%, however the proportion shows a decline in 2007 compared to 2005.

Table 4-1(b): Proportion of Children (Aged 10–17 years) by Region and Activities based on SUSENAS 2005 and 2007.

Category	SUSENAS 2005			SUSENAS 2007		
	Urban	**Rural**	**Total**	**Urban**	**Rural**	**Total**
Activity						
Attending School[a]	52.10	47.10	100%	36.27	63.73	100%10
Working[b]	21.70	78.30	100%	18.77	81.23	0%100
			100%10			%100%
Work Only[c]	23.52	76.48	0%100	18.43	81.57	100%
School Only[d]	37.35	62.65	%	37.54	62.46	**151,141**
Work and School[e]	16.67	83.33	**145,744**	19.16	80.84	
Number of Observations	**52,128**	**93,616**		**52,771**	**98,370**	

Source: Author's Calculation from SUSENAS 2005 and 2007.

Notes:

[a]The percentage of children who are currently attending school from the total number of children, regardless of other activities.

[b]The percentage of children who are reported woking from the total number of children, regardless of other activities.

[c]The percentage of children who are currently attending school only.

[d]The percentage of children who are work only.

[e]The percentage of children who are combining work and school from the total number of children who are attending school and working.

The independent variables (child, household and community characteristics) are similar across the years of survey to compare the pattern of the children's working and schooling. In addition, the explanatory variables used in this chapter are expanded from Chapter 3 to examine the effects of particular variables on the household's decision-making process. The child's age and gender, which disclosed differences in child, labour and schooling participation, are included in our analysis as child specific variables. As children get older, they are more likely to go to work instead of attending school. We hypothesize child's age to be positively related to work and negatively related to school. In terms of gender, boys were more likely to participate in the labour market compared to girls. Children who are cared by other than their biological parents have been found to be disadvantaged on school enrolment compared to the biological children. Thus, there is higher probability that non-biological child to be sent to work.

We therefore hypothesized a positive relationship between biological child and schooling, and negative relationship between biological child and working.

Older head of household are near or already in retirement. The working experience gained by the head of the household contributes to higher resources over time. Therefore, sending children to work is unnecessary and they are capable to send children to gain knowledge in school. Hence, the age of the household may have a positive relationship with schooling and a negative relationship with working. There is evidence from a previous study that shows child labour is more prevalent among household headed by females than by males (Priyambada et al, 2005). This is particularly true since most of job opportunities outside of the home require males to be hired compared to females. Therefore, instead of going out and looking for work, they may have to decide to send children to work rather than school. Some of employers hire children since they can pay children a lower wage compared to adults. Thus, we hypothesized a negative relationship between female-headed households and schooling and a positive relationship with working.

Education characteristics measure the level of education (years of schooling) of both the household head and spouse. Previous empirical studies have shown that the high level of education is negatively related to the probability of child working (Canagarajah and Coulombe, 1997; Ray, 2001b; Nkamleu, 2009) and positively related to the probability of schooling (Duryea and Arends-Kuenning, 2000; Huebler, 2008). As found by Priyambada et al. (2005), more than 90% of working children come from households headed by persons who only obtain primary school education or less and the rest come from households headed by persons who obtain secondary education. A study by Tharmmapornphilas (2006) showed spouse's educational attainment strongly reduces

the total hours of child work, especially for girls (see also Kurosaki et al, 2006). The number of household that do not report an absence of spouse is small; therefore, excluding the household without spouse do not have much effects on our estimation. It is hypothesized that education level of both household head and spouse are negatively related to child's work and positively related to child's schooling. According to Tharmmapornphilas (2006), children tend to work if the head of the household is a farmer, fisherman or other occupation that are related to agriculture. Children are found to be less likely to work if the head of the household is a factory worker and no significant result on the probability of working if the head of household is an office worker. Therefore, to investigate the impact, we included head of household and spouse's employment in our analysis. We hypothesized that children whose heads of households and spouses work as unpaid workers and casual workers spend more time working and have less time in school.

A common explanation of child labour claims that poverty is the underlying reason why children are sent to work. School attendance has its potential to increase future income, which is the more rational choice for parents in the long term. However, the needs for subsistence in the short-term lead parents to send their children to work (Huebler, 2008). As found by Phoumin and Fukui (2006), household income has a positive impact on school attendance and a negative impact on the probability of working. Hence, we included the household income (minus the total of child's wages in the household) variable, to investigate the effects on the probability of working and schooling. The effects are hypothesized to be positive on the probability of schooling and negative on the probability of working. A quadratic in household income is also included to determine any non-linearity in the relationship.

Households with a large number of children increase the burden on household members who are in working age, which consecutively cause children between 10 to 17 years to work and not attend school (Huebler, 2008). It is often argued that more intra-household resources are allocated for earlier-born children that leads them to have better education at a later stage. However, in the presence of child labour in the household, the effects of birth order are different since earlier-born children are able to command higher wages than their later-born siblings (Haile and Haile, 2007). Due to poverty, poor families cannot afford to send older children to school, but they may afford to send later-born children due to the income earned by their older siblings (Emerson and Souza, 2008). Therefore, we hypothesized that birth order have a positive association with the probability of working and a negative association with the probability of schooling.

Moreover, variables capturing the presence of a sibling's availability according to their age are also included in the model. The presence of younger siblings increases the demand for childcare services, which may hinder children attending school, particularly in the case of girls. Thus, children are more likely to go to work than attend school. According to Carvalho-Filho (2008), children's school enrolment decreased by 4.5% and labour participation increased to 1.7% with the presence of children with the age of 0–4 years and children with the age of 5–9 years in the household. In contrast, the number of adults (aged 18 years and above), which is a measure of household potential income, exerts a negative influence on child working. A study by Kevane and Levine (2003), finds evidence suggesting that first daughters among all other children in the household in Indonesia, are the least likely to be enrolled in school, and reseive the fewest years of education. Rural children have higher economic participation rates and lower attendance rates compared to urban children which may be due to poverty or an inadequate supply of schools (Kambhampati and Rajan, 2006; Huebler, 2008; Koissy-

Kpein, 2013). Thus, we suggest that there is a positive relationship between residing in rural areas with the probability of working and inverse relationship with the probability of schooling.

As farm size increases, farmers need more labour inputs (Nkamleu, 2009). Farm size was found to have a positive effect on the quantity of girls working in Ghana and Pakistan. However, there was no association for boys (Bhalotra and Heady, 2000). Contrary results for both genders were found in Bangladesh (Ravallion and Wodon, 2000). In addition, the effect of farm size might generate two sorts of substitution effects, either increasing or decreasing child labour. An increase in farm size may increase productivity of the farm labour holding and increase the labour input. Thus, children are less likely to attend school. On the contrary, an increase in farm size may contribute to increased wealth, which leads the parents to reduce the use of their children and send the children to school. In this study, size of privately owned farms and those managed by others for paddy and dry land is used to investigate the impact of landownership. We hypothesize that privately owned land is positively related to work. As a study by Bhalotra and Heady (2000), the vast majority of working children are involved in agricultural work, which is predominantly on farms operated by their own families. The land that is privately owned but managed by others is expected to be negatively related to work. The opposite relationships are expected for both land ownership types on the probability of schooling. However, privately owned land may have a positive relationship on the probability of schooling. Instead of the need of more labour (use of child labour) inputs to work on the land, households with high productivity may be able to afford school fees for their children (Nkamleu, 2009). Since the information on land ownership is only provided in SUSENAS 2005, we only use that single year. Estimation results are reported in Section 4.6.5. The variable names

and definitions of explanatory variables are given in Table 4-A1 and the summary statistics are given in the Table 4-A2 and Table 4-A3 in Appendix 4A.

Descriptive Statistics

The average age of children in the sample is 13 and 90% of children have a biological relationship to the head of the household (Table 4-A2 to Table 4-A3). Furthermore, the mean age of the household heads is 45 years. Households are usually headed by men and only 0.1% of households are headed by women. In terms of the household head's educational attainment, most of the household heads have completed primary education and the percentage of them that have a higher educational attainment are higher in urban areas compared to rural areas. In terms of spouse's educational attainment, spouses that have completed primary education show a higher percentage in 2005 and 2007.

The head of the households in rural areas are mostly employers. In urban areas, 46% of household head worked as employees. The proportion is quite similar for boys and girls in both surveys. The conditions are different for spouses, where they are more likely to work as unpaid workers especially in rural areas, which is consistent across the years of each survey. On average, the household income in 2005 is around IDR 0.99 million (equivalent to USD 828.79) per month. The mean of household income, as expected, is higher in urban areas for both surveys.

On average, children in our sample are the second child among their siblings in the household. The proportion of children with the age of 10-14 years is higher than other groups of age of children in the household. Approximately, three adults were present in households in SUSENAS 2005 and 2007. The number of adults is higher in urban areas than in rural areas across the years of the survey. Additionally, more than half of respondents reside in rural areas. The proportion of children is higher in North Sumatra,

West Java, Central Java and East Java compared to other provinces. West Java is known as the most populous province in Indonesia, followed by East Java and Central Java (Eric, 1992), while North Sumatra is the most populous Indonesian province outside of Java (Ananta et al. 2004). Based on the statistics in 2010, number of children with the age of below 18 years is about 81.3 million, where 54% of them reside in rural areas. The ratio of girls to boys is 94.6:100. The distribution of population aged 0-19 years with the largest number of children are located in West Java (16.4%, East Java (12.2 million) and Central Java (11.2 million). In contrast, provinces with the smallest number of children are West Papua (329,000), Gorontalo (436,000) and Bangka-Belitung Islands (463,000). In terms of the poor people, the highest numbers are in East Java (6.2 million), Central Java (5.7 million) and West Java (5.0 million). In addition, the highest poverty rates are reported in Papua (37.5%), West Papua (35.7%) and Maluku (28.2%). East Nusa Tenggara and Gorontalo has recorded that more than 25% of children live in extreme poverty, which is below the international poverty line of $1 purchasing power parity (PPP) or capita per day (UNICEF, 2009) .

4.4.1 School Participation Rates, Employment Rates and the Proportion Combining Work and School: Some Tabulation

In this section, the school participation rates and employment rates are described. In addition, the proportion of children combining work and school is investigated. The focus of this section is to examine the changes in the trend of schooling, working, and both schooling and working between boys and girls according to their age based on the SUSENAS data sets. The type of occupation and the sector of employment that the child had been involved in are also discussed to give a clearer picture of the incidence of child labour in a specific year of the survey.

4.4.1.1 School Participation Rates

The percentage of school participation decreases as the child gets older. Table 4-2 clearly shows that girls are more likely to participate in school compared to the boys at all levels of age. As found by Hsin (2007), girls spend nearly half an hour more time on schooling activities compared to boys. The higher reductions in the rates are among boys with the age of 13 years with 3 percentage points in 2007 compared to the rates in 2005. For girls, the highest decline in the school participation rates is among children with the age of 15 years with 2.5 percentage points between the years of the survey.

Table 4-2: School Participation Rates for Children Aged 10–17 years, 2005 and 2007.

Age	2005			2007			Percentage Point Change		
	Boys	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
10	98.7	98.9	**98.8**	98.3	98.9	**98.6**	-0.40	0.10	**-0.20**
	(0.11)	(0.10)	**(0.11)**	(0.13)	(0.10)	**(0.12)**			
11	98.1	98.6	**98.3**	97.9	98.8	**98.3**	-0.20	0.20	**0.00**
	(0.14)	(0.12)	**(0.13)**	(0.14)	(0.11)	**(0.13)**			
12	96.0	97.8	**96.9**	95.6	96.4	**96.0**	-0.40	-1.40	**-0.90**
	(0.19)	(0.15)	**(0.17)**	(0.21)	(0.19)	**(0.20)**			
13	93.9	96.1	**94.9**	90.9	94.3	**92.5**	-3.00	-1.80	**-2.40**
	(0.24)	(0.19)	**(0.22)**	(0.29)	(0.23)	**(0.26)**			
14	87.6	93.0	**90.2**	87.4	92.0	**89.5**	-0.20	-1.00	**-0.70**
	(0.33)	(0.25)	**(0.30)**	(0.33)	(0.27)	**(0.31)**			
15	80.5	89.0	**84.4**	79.0	86.5	**82.3**	-1.50	-2.50	**-2.10**
	(0.40)	(0.31)	**(0.36)**	(0.41)	(0.34)	**(0.38)**			
16	70.7	81.9	**75.9**	69.7	81.3	**74.8**	-1.00	-0.60	**-1.10**
	(0.46)	(0.38)	**(0.43)**	(0.46)	(0.39)	**(0.43)**			
17	60.1	73.9	**66.1**	59.0	71.8	**64.3**	-1.10	-2.10	**-1.80**
	(0.49)	(0.44)	**(0.47)**	(0.49)	(0.45)	**(0.48)**			
Total	**86.7**	**92.7**	**89.8**	**85.5**	**91.2**	**88.1**	-1.20	-1.20	**-1.80**
	(0.34)	**(0.27)**	**(0.33)**	**(0.35)**	**(0.28)**	**(0.32)**			

Source: Author's Calculation from SUSENAS 2005 and 2007.
Notes: Figures in parentheses are standard deviations.

In total, children with 13 years age reported the highest decline of 2.4 percentage points in school participation rates. No changes in school participation rates are observed for children with the age of 11 years between 2005 and 2007. Moreover, the rates clearly start to decline at the ages of 15 years and above, especially for boys. As we can see,

only 60% of boys with 17 years age participate in school. However, the rates are more than 70% for girls in 2005 and 2007. In addition, the higher gender gap is observed among children with the age of 15 years and above for both data sets compared to children with ages below than 15 years which is statistically significant with F-statistics of 896.96 (p-value: 0.0000).

4.4.1.2 Employment Rates

Table 4-3 shows that the employment rates increase, as children get older. In particular, older children are more likely to work since they can obtain higher wages than younger children, which could help afford other costs in the households and allow their younger siblings to attend school. The Table shows an increase in the percentage of working children from 2005 to 2007 at all age levels. The highest increase is among boys compared to girls, especially those who are 15 years old age. This is particularly true since the implementation of minimum age of 15 years to work in Indonesia. The table clearly shows that the change of the rate is increasing until at the age of 15 years, then it decreases to 2.2 percentage points and 1.6 percentage points at the age of 16 years and 17 years, respectively. In total, the employment rates has increased by 2.8 percentage points from 2005 to 2007.

Table 4-3: Employment Rates for Children Aged 10–17 years, 2005 and 2007.

Age	2005			2007			Percentage Point Change		
	Boys	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
10	1.3	1.1	**1.2**	3.0	2.2	**2.7**	1.70	1.10	**1.50**
	(0.12)	(0.10)	**(0.11)**	(0.17)	(0.15)	**(0.16)**			
11	1.9	1.4	**1.7**	4.5	3.1	**3.8**	2.60	1.70	**2.10**
	(0.14)	(0.12)	**(0.13)**	(0.21)	(0.17)	**(0.19)**			
12	4.0	2.3	**3.2**	7.1	4.7	**6.0**	3.10	2.40	**2.80**
	(0.20)	(0.15)	**(0.18)**	(0.26)	(0.21)	**(0.24)**			
13	5.9	3.8	**4.9**	10.7	6.3	**8.6**	4.80	2.50	**3.70**
	(0.24)	(0.19)	**(0.22)**	(0.31)	(0.24)	**(0.28)**			
14	11.8	6.7	**9.4**	16.5	9.8	**13.4**	4.70	3.10	**4.00**
	(0.32)	(0.25)	**(0.29)**	(0.37)	(0.30)	**(0.34)**			
15	18.5	10.6	**14.9**	23.7	14.0	**19.4**	5.20	3.40	**4.50**
	(0.39)	(0.31)	**(0.36)**	(0.43)	(0.35)	**(0.40)**			
16	27.1	17.1	**22.5**	29.3	18.7	**24.7**	2.20	1.60	**2.20**
	(0.44)	(0.38)	**(0.42)**	(0.46)	(0.39)	**(0.43)**			
17	37.0	24.5	**31.6**	38.3	25.9	**33.2**	1.30	1.40	**1.60**
	(0.48)	(0.43)	**(0.46)**	(0.49)	(0.44)	**(0.47)**			
Total	**12.6**	**7.5**	**10.2**	**15.9**	**9.5**	**13.0**	3.30	2.00	**2.80**
	(0.33)	**(0.26)**	**(0.30)**	**(0.37)**	**(0.29)**	**(0.34)**			

Source: Author's Calculation from SUSENAS 2005 and 2007.
Notes: Figures in parentheses are standard deviations.

Table 4-4 shows the proportion of boys and girls by types of employment in urban and rural areas of children reported working during the survey. Comparing the results by gender reveals that a high proportion of boys and girls worked as unpaid workers and the proportions are higher in rural areas in both 2005 and 2007. However, in terms of region, 37.7% of children worked as employees in urban areas instead of unpaid workers in 2005 and the proportion rose to 46.3% in 2007. The lowest proportion of the status of employment that children were engaged in was employer in 2005 and casual worker in 2007. Compared to other types of employment, which showed an increase between two years, the percentage of children who worked as casual workers shows a decrease in 2007 compared to 2005 for both gender and region. As we can see from Table 4-4, this may be due to the transition from work as casual workers to unpaid workers since the proportions of unpaid workers in 2007 have increased by 5 percentage points from 2005. In addition, the proportion of children in rural areas increased

between the survey years. The reduction in the proportion of children who worked as casual workers in 2007 compared to 2005 is probably due to a higher increase in the proportion of working children who worked as employees in urban areas.

Table 4-4: Proportion of Children According to Work Modality by Age Group, Gender and Region Conditional on Child's Working, 2005 and 2007.

Year	Sex and region	Work Modality (%)					Total
		Self-Employed	Employer	Employee	Casual Worker	Unpaid Worker	
2005	Boys	8.4	3.9	14.2	7.5	66.0	100%
	Girls	5.2	3.0	25.5	4.4	61.9	100%
	Urban	6.8	2.3	37.7	5.5	47.7	100%
	Rural	7.4	3.9	12.6	6.8	69.3	100%
2007	Boys	6.2	4.2	18.7	1.4	69.5	100%
	Girls	4.2	3.2	25.7	1.4	65.5	100%
	Urban	8.0	2.5	46.3	2.0	41.2	100%
	Rural	5.0	4.2	15.2	1.3	74.4	100%

Source: Author's Calculation from SUSENAS 2005 and 2007.

Since both boys and girls mostly worked as unpaid workers in rural areas, working children are largely involved in the agricultural sector. Table 4-5 shows that almost 65% and 76% of children is involved in the agricultural sector in 2005 and 2007, respectively. However, in urban areas, children who work as employees are mostly involved in wholesale, retail, restaurants and hotels (20.7% in 2005 and 30.9% in 2007), which requires more girls than boys (shown by the percentage in column 7). Furthermore, fewer children are involved in finance, insurance, real estate and business services sectors in both years of the survey. In terms of working hours, boys tend to work more hours than girls do and more hours in urban than in rural areas. This is particularly true since girls are mostly found to work as employees in the wholesale, retail, restaurants and hotels sectors that are located in urban areas, which require them to work long hours to earn income to endure the high cost of living in urban areas.

Table 4-5: Proportion of Children According to Sector of Employment and Average Weekly Working Hours by Age Group, Gender and Region, 2005 and 2007.

Year	Sex and region	Sector of Employment (%)									Total	Average Weekly Working Hours
		S1	S2	S3	S4	S5	S6	S7	S8	S9		
2005	Boys	60.0	2.2	5.8	2.8	6.7	2.6	0.05	2.3	0.04	100%	28.03
	Girls	40.9	0.7	11.5	0.1	13.7	0.4	0.05	12.8	0.02	100%	25.86
	Urban	12.8	1.0	13.5	3.5	20.7	3.1	0.1	15.8	0.1	100%	31.12
	Rural	64.6	1.9	6.2	1.4	5.9	1.5	0.03	3.2	0.01	100%	25.36
2007	Boys	72.2	2.2	5.6	2.6	8.7	2.3	0.2	3.9	2.1	100%	-[a]
	Girls	51.5	0.6	11.4	0.2	19.7	0.2	0.2	13.6	2.5	100%	-
	Urban	20.6	1.8	13.9	3.5	30.9	3.3	0.4	22.7	3.0	100%	-
	Rural	75.6	1.7	6.0	1.4	8.1	1.4	0.1	3.6	2.0	100%	-

Source: Author's Calculation from SUSENAS 2005 and 2007.

Notes:

[a] Since SUSENAS 2007 did not provide information of working hours, it is not possible to carry out a comparison of working hours between those two years of survey.

S1- Agriculture, **S2** – Mining and Quarrying, **S3** – Manufacturing, **S4** – Construction, **S5** – Wholesale, Retail, Restaurants and Hotels, **S6** – Transportation, Storage and Communications, **S7** – Finance, Insurance, Real Estate and Business Services, **S8** – Social services, and **S9** – Other Sectors.

4.4.1.3 Proportion of Children Combining Work and School

Launched in 1994, the achievement of implementing the Compulsory 9-year Basic Education Program in Indonesia falls short of its goal. The Government of Indonesia hoped that this objective would be completed by the end of 2003. However, the effects of the financial crisis in 1998 shifted the completion date to 2008/2009. According to Handayani et al. (2009), based on statistics from Indonesia, there are 705,000 children in the age of 7 to 12 years in who do not go to school, and there are 2,000,000 Indonesian children aged 13 to 15 years who are not in school. As can be seen in Table 4-2 and Table 4-3, the number of children in school slightly decreased while employment increased, especially for younger children. This is probably related to the study by Canagarajah and Coulombe (1997) in Ghana, where the high cost of schooling plus the low quality of education and pushed many children into work. However, it was possible for children to combine work and school by attending school in the morning

and doing part-time work in the afternoon. The proportion of children combining work and school is shown in Table 4-6. The proportion increases, as children get older, which is more prevalent in 2007.

Table 4-6: Proportion of Children Combining School and Work for Children Aged 10-17 years, 2005 and 2007.

Age	2005			2007			Percentage Point Change		
	Boys	**Girls**	**Total**	**Boys**	**Girls**	**Total**	**Boys**	**Girls**	**Total**
10	1.0	0.9	**1.0**	2.8	1.9	**2.3**	1.80	1.10	**1.30**
	(0.10)	(0.09)	**(0.10)**	(0.16)	(0.14)	**(0.15)**			
11	1.5	1.1	**1.3**	3.9	2.8	**3.4**	2.40	1.70	**2.10**
	(0.12)	(0.11)	**(0.11)**	(0.19)	(0.17)	**(0.18)**			
12	2.9	1.8	**2.4**	5.7	3.9	**4.8**	2.80	2.10	**2.40**
	(0.17)	(0.13)	**(0.15)**	(0.23)	(0.19)	**(0.21)**			
13	2.6	1.9	**2.3**	6.8	4.4	**5.7**	4.20	2.50	**3.40**
	(0.16)	(0.14)	**(0.15)**	(0.25)	(0.21)	**(0.23)**			
14	4.2	2.8	**3.5**	9.3	6.1	**7.8**	5.10	3.30	**4.30**
	(0.20)	(0.17)	**(0.18)**	(0.29)	(0.24)	**(0.27)**			
15	5.3	3.0	**4.2**	10.9	7.3	**9.3**	5.60	4.30	**5.10**
	(0.22)	(0.17)	**(0.20)**	(0.31)	(0.26)	**(0.29)**			
16	4.3	3.3	**3.8**	9.2	7.6	**8.5**	4.90	4.30	**4.70**
	(0.20)	(0.18)	**(0.19)**	(0.29)	(0.27)	**(0.28)**			
17	4.2	3.7	**4.0**	9.2	8.1	**8.7**	5.00	4.40	**4.70**
	(0.20)	(0.19)	**(0.20)**	(0.29)	(0.27)	**(0.28)**			
Total	**3.2**	**2.2**	**2.7**	**7.0**	**5.0**	**6.1**	3.80	2.80	**3.40**
	(0.18)	**(0.15)**	**(0.16)**	**(0.26)**	**(0.22)**	**(0.24)**			

Source: Author's Calculation from SUSENAS 2005.
Notes: Figures in parentheses are standard deviations.

Boys are more likely to combine work and school compared to girls; however, the gaps between boys and girls are small. Moreover, the percentage change is higher among children aged 15 years with 5.1 percentage points between the years of the survey. As can be seen in Table 4-2, the number of children in school decreases as the child's age increases, and the findings are in contrast to those children who are reported working (Table 4-3). In particular, the proportion of children combining school and work increases with age until 15 years, and then falls at the age of 16 and above for boys in 2005 and 2007. However, the rate increases for girls. In total, the percentage change varies according to the age and gender of the child. The data clearly shows a dramatic

increase over the 2 years of the survey. Specifically, the proportion of combining work and school in 2005 is 2.7 then gradually increases to 6.1 in 2007.

Analysing SUSENAS data shows that school participation rates decreases with the child's age, but the opposite pattern is observed between employment rates and child's age. In particular, the percentage of children in school decreases over the 2 years. Employment rates increased from 10.2% in 2005 to 13.0% in 2007, and the changes in percentage decreased with age. The awareness about the importance of getting an education leads the children to combine work and school even though the percentage of children in employment is higher. Therefore, the proportion of children combining work and school shows increases over 2 years of the survey.

4.5 Econometric Specification

School attendance and child work are two separate but inter-related activities because the working time is part of the time taken for schooling and vice versa. In an environment where children's time has an economic value and children can contribute to household income, parents do not simply choose between sending their children to school or not but they also consider the possibility to work for their children (Chamarbagwala, 2008). This chapter employs a bivariate probit model to test the probability of children working and attending school. The advantage of using this model is that it allows for the existence of possible correlated disturbances between the two probit equations (Canagarajah and Coulombe, 1997). The first reason of using bivariate probit is to test if the two outcomes are jointly determined, and secondly it was to ascertain whether one outcome is more or less likely without the other. Thus, this

method can establish, the likelihood for a child to work if a child attends school, or conversely, if school attendance is more likely without child work (Lopez-Acevedo, 2002). The bivariate probit model assumes that there are two latent variables y_1^* and y_2^* that can be expressed as linear functions of variables that affect the likelihood of participation in school and work. The dependent variable would be a dichotomous variable taking the value 1 if the child is engaged in the labour force and/or attending school, and 0 otherwise. Full description of how the dependent variable was created has been discussed in Chapter 3 and Section 4.4. Therefore, the general specification for a two-equation model can be written as:

$$y_1^* = \beta_1' X_1 + \varepsilon_1 \qquad y_1 = 1 \; if \; y_1^* > 0, 0 \; otherwise$$

$$y_2^* = \beta_2' X_2 + \varepsilon_2 \qquad y_2 = 1 \; if \; y_2^* > 0, 0 \; otherwise$$

with:

$$E[\varepsilon_1] = E[\varepsilon_2] = 0$$

$$Var[\varepsilon_1] = Var[\varepsilon_2] = 1$$

$$Cov[\varepsilon_1, \varepsilon_2] = \rho$$

Where, ε_1 and ε_2 are error terms with normal distributions, ρ is the coefficient of correlation between the two equations, X_1 and X_2 are the row vectors of exogenous variables which determine working and schooling propensities respectively, and β_1 and β_2 are associated parameter column vectors. The likelihood function to maximise is given by:

$$L = \prod \int_{-\infty}^{\beta_1' X_1} \int_{-\infty}^{\beta_2' X_2} \emptyset_2(z_1, z_2; \rho) dz_2 dz_1$$

where $\emptyset_2$, the bivariate normal density function, is written as:

$$\emptyset_2(z_1, z_2, \rho) = [2\pi(1-\rho^2)^{\frac{1}{2}}]^{-1}\exp[-1/2(1-\rho^2)^{-1}(z_1^2 + z_2^2 - 2\rho z_1 z_2)]$$

The coefficients are not adjusted, instead marginal effects are calculated separately, based on the coefficients. In this bivariate probit model, $E[y] = \emptyset(\beta' x)$, the marginal effects are $\frac{\partial \Phi(\beta' x)}{\partial x_i} = \emptyset(\beta' x)\beta$. These marginal effects would obviously vary with the values of x. However, it is worth nothing that all the coefficients β would have the same scale factor of $\Phi(\beta' x)$. In case of dichotomous variables, marginal effects would be correct for infinitesimal changes in explanatory variables.

4.6 Estimation Results

Results from the estimation of the bivariate probit models are presented in Tables 4-7 to 4-18. Table 4-7 and Table 4-13 give the estimate of the parameters in terms of marginal effects that affect the work and schooling decision of all children aged 10–17 years in 2005 and 2007 with the estimates for gender-divide and region divide. In addition, Table 4-8 and Table 4-14 present the results of both genders in each region for each year of the survey. Table 4-9 and Table 4-10 give the result for children aged 10-14 years old and Table 4-11 and Table 4-12 show the results for children aged 15-17 years in 2005. The results for children aged 10-14 years and 15-17 years in 2007 are given in Table 4-15 to Table 4-18. Overall, the different estimations presented in all tables are highly significant as confirmed by the Chi Square test. Furthermore, the rho (ρ) coefficient between the child labour and schooling equations are negatively significant. This formally justifies the use of the bivariate probit model and validates the existence

of unobserved factors that would act upon the two activities in opposite directions (Ndjanyou and Djienouassi, 2010).

4.6.1 Estimates of Bivariate Probit for All Children

Table 4-7 and Table 4-13 give the marginal effects estimated for the children's school and work decision for the years 2005 and 2007. The chi-squared is highly significant for both years. The joint estimation of schooling and work is appropriate as the likelihood ratio tests of the hypothesis (correlation between the error terms (ρ) is zero) are rejected. A significantly negative ρ states that some unobserved factors that increase the probability of attending school decrease the likelihood of working. Thus, schooling and child labour are competing activities. Our results show that child schooling is negatively associated with age and girls' school attendance rates are higher than boys in both years of the survey. On the other hand, the probability of working is positively associated with age and boys' working rates are higher than girls in 2005 and 2007. These results indicate the existence of a gender bias in children's time allocation. Kamga (2010) and Canagarajah and Columbe (1997) attain a similar finding. We also provide estimates of two different age groups, which are shown in Table 4-9 to Table 4-12 for 2005 and Table 4-15 to Table 4-18 for 2007. The nature of relationship to the head of the household has a significant impact on the probability of schooling as well as working. In particular, children that have a biological tie with the head of the household are 6.8% more likely to attend school in 2005. The probability is decreased by 5-percentage points in 2007. In terms of working, biological children are 7% less likely to work and the probability is similar in both years of survey. This shows that parents prefer to send

their own children to school as the children's provision of old-age support in their older age.

The probability of being in school rises significantly with the head of the household's age and the probability of working falls significantly with the head of the household's age. However, the effect is small for both in 2005 and 2007. According to Khan (2003), upsurge in household head's age shows that their skill and experience had expanded. This increases household head's earning capacity that makes the household economically more viable. Therefore, an older head of the household decides to send children to school. Our results also show a significant effect of female-headed household on the probability of schooling in 2005. However, no significant negative effects are observed on the probability of working. Similar results are also found in Pakistan by Burki and Shahnaz (2001), Ali and Khan (2003) and Khan (2003).

The education level of the household's head is assumed to be linked to increased school attendances of children. This is because educated adults are more likely to recognize the value of education and send the children in their care to school. Thus, they are also more likely to have higher incomes, which give them the means to afford costs of schooling of the children in their household (Huebler, 2008). On the other hand, the educational level of the household head significantly improves children's education and decrease the probability of working. Children from households headed by a person with at least primary education are 3.2% more likely to attend school than children from households headed by a person with no primary education in 2005. The probability is increased by 0.4 percentage point in 2007. This implies complementarity between the education of the head of the household and child's schooling (Khan, 2003). This may be because educated parents improve the household's efficiency on allocating resources, thus it is

possible to send children to school. In contrast, the probability of working is 3% in 2005, and then decreased by 0.3 percentage point in the next 2 years of the survey. Spouse's educational level has similar effects as household head's educational level. The results show a small difference between the effects of spouse' educational level on the probability of schooling and working with household head's educational level in 2005 and 2007. Tunali (1996) and Wahba (2005) provided similar results in Turkey. This finding has strengthened the notion that parental education is the most consistent determinant of child's schooling and employment decisions.

Households with heads who are employees have a low incidence of child labour of 1.3% in 2005. In Pakistan, Hamid (1994) also found a low incidence of child labour among households with heads who are government employees compared to households with heads who are self-employed (see also Grootaert and Patrinos, 2002). Our results also show household heads, who are private employees, the incidence of child labour increases to 13%. However, households with heads who are employees improves the child's schooling, where children are 1.3% more likely to attend school in 2005, and the probability is decreased by 0.4 percentage point in 2007. Household heads who are employers positively related to the probability of schooling and working in both years of the survey. This may be due to their high ability, in terms of finance, that allows them to send their children to school. At the same time, they may be able to hire their own children to work with them. As found by Hamid (1994), 18% of child labour is found among household heads who are labourers in Pakistan. Coulombe (1998) has found that children form the households with heads who are working in farms are 11% more likely to participate in labour activities. Our results of households with heads who are casual workers and unpaid workers also show similar findings. In particular, children are more likely to work and less likely to go to school in 2005 and 2007.

Cartwright and Patrinos (1999) found that Bolivian children, whose mothers work, are 33% more likely to work. Another study by Cartwright (1999) in Colombia shows that the employment status of mothers is positively associated with child labour where mothers and children are complements in the labour market. Our results also support the findings that children are more likely to work when spouses (mostly mothers) tend to work. Consequently, children are less likely to go to school when mothers work in 2005 and 2007. This result reinforces the previous findings, where mothers and children are thought to be complements.

As expected, an increase in household income leads children to work less and do more schooling. Cartwright (1999) shows a negative correlation between family income and child labour participation among children in Colombia. Coulombe (1998) also has similar findings for Cote d'Ivoire (see also Patrinos and Psacharopoulos, 1995; Grootaert, 1998). Kruger et al. (2007) find that increases in household income are associated with higher school attendance and lower child labour. Our results confirm the significant effect of household income on the probability of working and schooling. In 2005, children are 2.5% more likely to attend school and 2.6% less likely to work as the household income increased by IDR 10,000. The probability dropped by 0.4-percentage point and 1.9 percentage points for schooling and working in 2007, respectively. The effects of quadratic terms of household income are significant, which show the increase on the probability of schooling with decreasing rates. Inverse relationships are shown between quadratic terms of household income and the probability of working.

Since older children are the alternative source of additional income in poor families, they work more than their younger siblings do. As a result, they end up with lower levels of education (Tenikue and Verheyden, 2008). Our results show that older

children are 2.9% less likely to attend school in 2005 and 2007. The significant effects are also observed on the probability of working, where older children are 3.3% more likely to work in 2005. The probability declined by 0.3 percentage point for 2007. Our results clearly show that the probability of schooling is higher for children aged 6-9 years compared to children aged 10-14 years. No significant effects are observed on the probability of schooling of children aged 15-17 years in both years of survey. In contrast, children with the age of 15-17 years are more likely to work compared to other siblings in the household. Moreover, the number of adults in the household increases the probability of schooling by 4.4% in 2005, and drop to 0.3% in 2007. On the contrary, the probability of working increased by 0.2 percentage point in 2007 compared to 2005.

Many schools, especially in rural areas suffer from lack of adequate teaching facilities and teachers. Too few and inaccessible schools, inadequate infrastructure and transport facilities further discourage parents to send their children to school (Chamarbagwala, 2008). Thus, urban children are more likely to attend school and less likely to go to work than rural children. This is due to a benefit from a better-developed education infrastructure provided in urban areas. This is true since our results show that children in rural areas are 2% less likely to go to school in 2005 and 2007. In terms of working, children in rural areas are 3.1% more likely to work than their counterparts in urban areas in 2007, which is 0.8 percentage point more than 2005. This is particularly true since most of children who are found working are located in rural areas. They are mostly found to engage as unpaid workers in agricultural sector (as mentioned in Section 4.4.1.2). The only significant effect of landownership is shown by the privately owned but managed by others (both paddy and dry land) on the probability of schooling. Particularly, children are 3.8% more likely to go to school if the family

owned but managed by others' land increased by 1 hectare. With regard to age, land ownership does significantly and positively affects the probability of schooling for children aged 15-17 years. Specifically, girls are more likely than boys to go to school and children in rural areas are more likely to attend school than their counterparts in urban areas.

Children's participation rates in schooling and in economic activities also variy across provinces and most of the coefficients are significant at the 5% level. Children tend to go to school more than to work in most of the provinces across the years of survey. The higher probability is shown in the province of Nangroe Aceh Darussalam (NAD) compared to the province of Papua, where children are 9% more likely to attend school in 2005. The probability then increased by 1 percentage point in 2007. NAD has substantial natural resources, especially oil and natural gas and was known as the most wealthy, powerful and cultivated state in the Malacca Straits region in the early seventieth century. Moreover, there are large increases in nominal wage in particular sectors, such as construction where, worker's nominal wages have risen to almost Rp 60,000 per day compared to Rp 29,000 before the tsunami (World Bank, 2007). Therefore, parents in the province of NAD are able to send their children to school due to higher earnings. In addition, children are more likely to work in Bali especially in 2007 compared to children in West Papua. Even though tourism is the largest single industry in terms of income, agriculture is still the island's biggest employer. The most known activity is rice cultivation, which is quite labour-intensive.

4.6.2. Estimates of Bivariate Probit by Gender

As can be seen from Table 4-7 (column 3-6) and Table 4-13 (column 3-6), the coefficient of correlation between the errors in the two equations of boys and girls are statistically significant, justifying the application of the bivariate probit model to jointly estimate the two binary outcomes. As expected, boys are more likely to work and they are more likely to attend school than girls. This indicates the existence of gender bias in children's time allocation. As given in Table 4-7 and Table 4-13, boys and girls are more likely to go to school and less likely to go to work, as they get older. The nature of the relationship to the head has a significant impact on the likelihood of school attendance as well as work participation, especially for girls compared to boys in 2005 and 2007. This indicates that the household head is more altruistic to girls compared to boys, a result which is similar to that of Rickey (2009) for Philippines children.

With respect to household head's characteristics, age of the head has a significant impact on both binary outcomes, but with stronger effect on girls. Households headed by females are significant and negatively associated with boys' and girls' schooling in 2005. Insignificant effects are observed on the probability of working in 2005 and on both binary outcomes in 2007. In particular, girls are 6.1% less likely to go to school when females head the household, which is 0.3 percentage point more than boys. The education levels of both head of household and spouse strongly reduce the probability of work and school. The coefficients are larger for boys, but the higher difference in magnitude between boys and girls is shown by spouse's education. These findings were also reported in Tharmmapornphilas (2006), Haile and Haile (2007) and Rickey (2009). According to Pitriyan (2006), for a child who lives in a farm-worker household, the probability of being involved in agricultural working, either as an unpaid worker or a casual worker is greater than a child who lives in a non-agricultural household. This is

supported by the results, where the effects are larger for boys compared to girls if the household heads work as unpaid and casual workers. This is particularly true since about 66% of boys (Table 4-4) are found to be working as unpaid workers. In a separate table, 60% of boys (Table 4-5) who are involved in agricultural sectors, which are 64.6% are located in rural areas. However, the effects of households with heads and spouses who worked as employers and employees are higher for girls compared to boys in both years of the survey.

An increase in the household income reduces the probability of boys' working, with boys being 2.7% less likely to have work when the household income increased by IDR 10,000 in 2005. The magnitude is 0.4 percentage point higher than that for girls. No significant effect is shown for girls' working in 2007. Increase in the household income also improves child's schooling, especially for boys. The number of children in the household in the age groups of 0-5 and 6-9 increases the demand on household resources, which is probably imposing a burden on boys' and girls' school attainment and enrolment. The magnitude of the effects is larger for boys than girls in 2005 and 2007. In addition, the number of adults in the household is a measure of a household as potential income (Carvalho-Filho, 2008). The number of adults does significantly improve boy's schooling, but it does not have a significant effect on girl's schooling in both years of the survey. In terms of working, the effects are larger for boys compared to girls. Our results also confirm the result of Elijah and Okoruwa (2007) and Nkamleu (2009) that boys are more likely to work in rural areas compared to girls. On the other hand, boys are participating less in school compared to girls. The privately owned land but managed by others significantly improves girls' schooling, and has no significant effects on boys' schooling and working.

4.6.3 Estimates of Bivariate Probit by Region

Children's age and gender show larger effects in rural areas compared to urban areas in both years of the survey as shown in Table 4-7 (column 7-10) and Table 4-13 (column 7-10). Biological child of household head in urban areas has the advantage, in terms of schooling than biological child in rural areas. A similar result is observed for child's working condition. Moreover, households headed by females have significant effects in urban areas in 2005. Particularly, children are 76% less likely to work and 4.9% more likely to attend school in urban areas. However, insignificant impact is shown in rural areas and in 2007.

Parental educational levels are crucial factors in child employment and education, with a significant contribution in reduction of child labour and improvement in the probability that children are sent to school. This is confirmed by our results, but the effects are larger in rural areas than in urban areas. As discussed above, unpaid and casual workers are mostly found in rural areas and the positive relationships are observed between the heads and spouses who work as unpaid workers and the probability of working. Thus, a region-divide result confirms that the effects are larger in rural areas than in urban areas in 2005 and 2007. On the other hand, the effects of heads and spouses who are working as employers and employees on the binary outcomes are stronger in urban areas than in rural areas.

According to ILO (2006), 75% of the 1.1 billion poor with less than USD1 per day live in rural areas and depend completely on agriculture for their survival. In addition, the high rates of dropout in school in rural areas lead to low productivity and incomes of rural populations in the longer term (ILO, 2011). Increase in income improves child's schooling and the effects are significant in both urban and rural areas. The effects are

larger in rural areas than in urban areas in 2007, and vice versa in 2005. Hence, children are less likely to work if there is an increase in household income. According to Khan (2003), the number of male and female siblings with the ages of 15 years and above in the household influences the tendency for the child to go to school. Our results show the number of male siblings has more impact as compared to female siblings on the decision to send children to school and to work. This explains that these male siblings (aged 15 years and above) lower the need for child labour and release the school-age children to go to school. Land ownership does not show any significant effects on both binary outcomes either in urban and rural areas.

4.6.4 Estimates of Bivariate Probit by Gender and Region

Our results confirm that boys (at all age groups) residing in rural areas are more likely to work and less likely to go to school in 2005 and 2007 (Table 4-8 and Table 4-14). The effects of a biological child with the household heads and the age of the household heads are large for girls in urban areas, where they are more likely to go to school and less likely to work. A female-headed household is significant and negatively associated with the probability of schooling in urban areas for both boys and girls. On the other hand, a female headed household significantly affects the probability of working for girls but not for boys in 2005. In 2007, the effect is significant only for girls in urban areas. We find that the educational level of heads, spouses, household income, birth order and number of adults largely affect the two binary outcomes in rural areas compared to in urban areas. Specifically, the effects can be observed more on boys than girls, a similar result in urban areas in 2005 and 2007.

The composition of children in the household shows significant and strong effects in rural areas compared to urban areas. According to Wahba (2000), girls in age groups of 6-11 and 12-14 years are less likely to be engaged in work compared to boys. Kruger (2007) finds that the number of 0-5 year old children positively affects girls schooling, but there is no effect on schooling for boys. We also have the same results, where both boys and girls are more likely to go to school by the additional number of 0-5 year old children in the household. With regards to child labour, additional number of older children in the household negatively affects working and is larger for boys compared to girls. This supports the view that prime-age siblings (15 years and above) improve schooling of school-age children and reduces their child labour. In addition, land ownerships significantly reduce the probability of boys' working in urban areas. Specifically, boys are 5% less likely to work if the privately owned land of paddy increased by 1 hectare. Discussion of this finding is given in the next section.

4.6.5 Estimates of Bivariate Probit: Effects of Land Ownership

Existing literature proves that farm size has a positive effect on the probability of a child working. An increase in land size will increase the marginal productivity of labour leading to increased labour hiring, especially among children. This phenomenon is known as the 'wealth paradox' (Bhalotra and Heady, 2003). This paradox suggests that children of large landholding households are more likely to work and less likely to attend school compared to the children of poor-land households. A study by Basu et al. (2007) finds that child labour increases approximately by half hour per day for every acre of land. However, the opposite effect may also occur, where farm size is negatively associated with the probability of children working because increase in farm size tends

to increase income. Self and Grabowski (2009) find that land ownership is statistically significant and negatively associated with children who belong to families with less than 1 acre of land to work.

Instead of the information on land ownership by households, SUSENAS 2005 provides information on crop types such as paddy and other crops that are planted on the dry land. Other crops are corn, cassava, sweet potato, peanuts, mung beans, onions, chillies and tobacco. In Indonesia, rice is the staple food of most people and is mainly produced in rural areas, in the islands of Java and Sumatra, followed by Sulawesi and Kalimantan. To observe the effects of land ownership on schooling and working, we include three variables. These are privately owned paddy land; private owned dry land and privately owned land (paddy and dry land) but managed by others. All are measured in hectares (ha).

Table 4-7 and Table 4-13 show the effects of land ownership on the probability of schooling and working for all children in 2005 and 2007. The results are reported for all children (column 1), and by gender and region separately. Since the effects and the pattern of the variables on both probabilities are discussed previously, this section will focus on the variable of land being privately owned f paddy and dry land, and privately owned but managed by others for both paddy and dry land. The pooled sample (column 1) shows that households that are privately owned but managed by others increase the probability of schooling by 3.8%. Moreover, girls are 4% (column 5) more likely to go to school when the privately but managed by others' land increased by 1 ha. A similar pattern is also observed for children with the age of 15-17 years (Table 4-11). Our results are significant for pooled sample (column 1), for girls (column 5) and for children in rural areas (column 9). On the other hand, privately owned land of paddy significantly and negatively affects the probability of working for boys in rural areas

(Table 4-8). However, no significant results are observed for privately owned dry land on both binary outcomes.

Since there are significant results in the sample of all observations (Table 4-7, column 1), for girl's schooling (Table 4-7, column 5), boy's working (Table 4-8, column 2) and in both gender and region sample (Table 4-12, column 5), further analyses of the findings are necessary. Owning land requires labour input in terms of the number of labourers (Bhalotra and Heady, 2000), and was usually owned by households in the middle to upper wealth categories. On the other hand, if households are rich in land, there is a higher labour demand within the family (Cigno et al. 2002). Instead of using household income, monthly expenditure, is used to measure the wealth categories for the discussion. The percentage of working children by the quintile of monthly household expenditure is shown in Table 4-19.

Table 4-19: Percentage of Households Owning Land by the Types of the Crops based on the Monthly Household Expenditure (Quintile), 2005.

Land Ownership (types of crops)	**Household Expenditure (Quintile)**				
	Q1	**Q2**	**Q3**	**Q4**	**Q5**
Own agricultural land	**68.6**	**75.5**	**71.9**	**65.3**	**48.9**
Paddy	23.7	29.1	27.2	27.5	19.5
Dry Land	53.0	60.1	58.9	54.3	39.2
Both	16.7	8.4	6.5	6.2	5.2
Paddy Only	7.0	39.5	38.2	33.1	24.9
Dry Land Only	36.3	20.7	20.6	21.3	14.3
Owned but managed by others	**5.2**	**5.3**	**3.5**	**5.1**	**5.7**

Source: Author's Calculation from SUSENAS 2005.

More than half of households own agricultural land and they are most prevalent in the second lowest quintile (Table 4-19), which is in contrast to the study by Bhalotra and Heady (2000), which found that land was owned by households in the upper quintile. Farmers in Indonesia prefer to grow rice than other crops, even though the risks are

greater (Koo et al. 1985). This is due to an increase in per capita rice consumption every year. In addition, farmers also respond to rice prices. According to Mubyarto (1965), a high price of rice in one year is followed by an increase in production in the next year, and vice versa. Instead of rice cultivation, farmers also plant dry land crops such as soybean, maize, groundnut, cassava, potato and mungbean. The Mass Guidance (BIMAS) Scheme is an integrated system designed by Government of Indonesia to develop conditions where a large number of farmers can adopt new technology to increase their productivity and income. In addition, they are trained in terms of technology, training, and implementation of new techniques. Therefore, instead of requiring more labours, this technology is labour saving, which reduces the requirement of child labour and increases the opportunity for children to be sent to school.

Table 4-20: Mean of Working Days of Working Children, Work Hours and Child's Wage by the Types of Land Owned and Crops, 2005.

Types of Crops	**Working Days (mean)**	**Working Hours (mean)**	**Earnings (Rp.)**
Privately Owned:			
Paddy	5.46	28.28	46357.57
Dry Land	5.47	27.98	38175.05
Owned but managed by others	**5.37**	**27.28**	**45732.95**

Source: Author's Calculation from SUSENAS 2005.

Moreover, looking at the average earnings of working children by types of crops reveals that children in the household that owned the paddy land earned more than others (Table 4-20). This is followed by children in the household that owned land but managed by others. Earning from these two types of households' land ownership is more than enough to contribute to family income, which can then be used to send school-age children to school. Thus, households who own land are expected to decrease the probability of working and increase the probability of schooling. However, the coefficient is found to be significant on the probability of working for urban boys'

sample only. With regard to child's schooling, a significant effect is shown by the privately owned land but managed by others on pooled sample and girls' sample. In addition, children with the age of 15-17 years are more likely to go to school if the households own land but managed by others. There are no significant effects for children with the age of 10-14 years. This clearly shows that land ownership does not strongly affect the decision of households either to send children to school or to work.

4.7 Conclusion

Our data reveal that more than half of children participate in school. In addition, 45% of working children are still attending school. Since working children are among school-age children, the objective of this chapter is to examine the determinant of child joint schooling and employment decisions. Therefore, this chapter investigates factors influencing the probability of schooling and working using a bivariate probit model. Our empirical analysis uses data from the National Socioeconomic Survey (SUSENAS) of 2005 and 2007, and our sample consists of children aged 10-17 years.

The results reveal that children are more likely to go to work and less likely to attend school, as they get older. Boys are more likely to work than girls especially in rural areas since a higher number of them are involved in the agricultural sector as unpaid workers and casual workers. The probability of schooling increases, while the probability of working decreases if the children are biologically related to the head of the household. In particular, daughters of the household head have more of an advantage than sons in urban areas than in rural areas. The age of the household head significantly decreases the probability of working and increases the probability of

schooling over time across both surveys. In addition, girls are affected much more than boys in terms of attending school and working if a female heads their household. This effect is significant in urban areas, while no significant effects in rural areas. This condition reveals the existence of altruism between female-headed household and girls over boys, which was shown in SUSENAS 2005.

The levels of educational attainment of household head and the spouse have a greater effect on increasing the probability of schooling and decreasing the probability of working among boys than girls and in rural areas than in urban areas. In particular, the probability of schooling increases as the educational attainment of the head of the household and the spouse increases. The opposite impact is observed for the probability of working between years. In addition, the effects of the employment status of the household head and the spouse on the probability or working and schooling are different according to the types of employment. Being an employer and employee leads the children to attend school more relative to working. The effects are higher for boys than girls and in rural areas compared to urban areas over time. Moreover, having the household head and spouse in the household who work as unpaid workers and casual workers shows the reverse pattern. However, it is clear that the effect of household characteristics has a larger impact than spouse's characteristics.

An upsurge in the household income improves child's schooling and reduces child's working. This supports the Luxury Axiom of Basu and Van (1998). The results are significant over time for both surveys; however, it was not significant for urban boys' employment and rural girls' employment and schooling in 2005. Once again, the impacts are higher for boys than girls. Younger children have an advantage in going to school and older children are more likely to go to work instead of school. These effects

are stronger in rural areas than in urban areas and among boys relative to girls. Children are more likely to work if the households have school-age children and are less likely to work if there are additional number of children with the age of 10-14 years and adults in the same household. Since children were mostly found to be working in rural areas, the probability of working shows a positive sign, while the opposite sign is shown on the probability of schooling. This is particularly true in rural areas, since children have difficulties accessing school, and even though they find it easy to get to school, the low quality of education often makes school attendance not worthwhile to children. The probability of schooling and working differs between provinces. In total, children in the province of NAD show a higher probability of attending school than other provinces. This is because NAD is a special region of Indonesia and has the largest range of biodiversity in Asia Pacific region. Since most of schools were destroyed in the 2004 earthquake, temporary learning centres (learning materials are provided) are built by The United Nations Children's Fund (UNICEF) together with the Government of Indonesia. This indicates that children in NAD receive special attention, particularly in terms of education. In terms of working, the probability varies according to the child's gender and depending on regions and provinces where the child normally lives.

The effects of the privately owned paddy land were only found to be significant on the probability of working for boys in urban areas, but there is no significant effect of privately owned dry land on both probabilities in terms of gender, region and both genders and regions. Furthermore, privately owned paddy and dry land managed by others showed a significant and positive association with the probability of schooling in all samples and in girls' sample. Privately own land but managed by others also improves schooling especially for girls aged 15-17 and in rural areas. This weak effect

shows that land ownership does not strongly influence the family decision-making process upon children's activities.

These findings have important implications for current efforts to reduce child labour participation in Indonesia. The main initiatives are in improving the welfare of the rural community, which will inevitably increase the return to schooling especially among children. Lack of information on educational facilities limits our investigation on looking at the effects on the probability of schooling. Therefore, further analyses are required here in future. Although Indonesia has made a good recovery from the 1997 financial crisis, those who are poor are worse-off since the gap between rich and poor is widening, and this is particularly true for rural areas rather than urban areas[6]. The results reveal that parental education has a strong negative impact on the probability of working and this should be considered seriously. The 9-year compulsory education that was implemented by the Government of Indonesia should be monitored seriously and continuously to ensure the quality of human capital. Moreover, in the situations where educational facilities are poor, training arrangement might have better effects in long-term. On top of that, to ensure the future success of the program, parents play the most important role in making a decision to secure the future of their children with the help of government agencies and NGOs to make sure children get the best education in order to create a new generation without relying on child labour.

[6] _____. (2013). 'Enabling Poor Rural People to Overcome Poverty in Indonesia: Rural Poverty in Indonesia'. The International Fund for Agricultural Development, IFAD, 2013. Retrieved November 27, 2013 from http://www.ifad.org/operations/projects/ regions/ PI /factsheets/id.pdf

Table 4-7 : Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2005.

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Age Groups										
10 to 12 years	0.1129*	-0.0763*	0.1251*	-0.0912*	0.0970*	-0.0571*	0.0774*	-0.0562*	0.1293*	-0.0863*
	(0.0024)	(0.0022)	(0.0035)	(0.0033)	(0.0033)	(0.0029)	(0.0038)	(0.0036)	(0.0031)	(0.0029)
15 to 17 years	-0.1074*	0.0986*	-0.1257*	0.1177*	-0.0845*	0.0746*	-0.0749*	0.0722*	-0.1239*	0.1120*
	(0.0018)	(0.0018)	(0.0026)	(0.0026)	(0.0024)	(0.0023)	(0.0027)	(0.0026)	(0.0024)	(0.0023)
Child Characteristics										
Girls	0.0354*	-0.0401*	-	-	-	-	0.0173*	-0.0120*	0.0456*	-0.0568*
	(0.0015)	(0.0014)					(0.0021)	(0.0018)	(0.0019)	(0.0019)
Biological Child	0.0667*	-0.0658*	0.0465*	-0.0422*	0.0764*	-0.0750*	0.0859*	-0.0786*	0.0397*	-0.0382*
	(0.0028)	(0.0026)	(0.0044)	(0.0041)	(0.0034)	(0.0029)	(0.0033)	(0.0029)	(0.0041)	(0.0039)
Household Head's Characteristics										
Age	0.0009*	-0.0006*	0.0005*	-0.0002	0.0013*	-0.0009*	-0.0010*	-0.0009*	0.0008*	-0.0002**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.0571**	0.0117	-0.0577**	-0.0001	-0.0611**	0.0201	-0.0757**	0.0493**	-0.0275	-0.0391
	(0.0193)	(0.0207)	(0.0278)	(0.0305)	(0.0251)	(0.0245)	(0.0228)	(0.0205)	(0.0279)	(0.0324)
Household Head's Education										
Completed Primary	0.0318*	-0.0299*	0.0340*	-0.0336*	0.0290*	-0.0252*	0.0283*	-0.0195*	0.0338*	-0.0335*
	(0.0029)	(0.0027)	(0.0042)	(0.0039)	(0.0040)	(0.0036)	(0.0056)	(0.0049)	(0.0036)	(0.0034)
Junior Secondary	0.0865*	-0.0661*	0.0974*	-0.0777*	0.0230*	-0.0501*	0.0729*	-0.0503*	0.0921*	-0.0721*
	(0.0036)	(0.0033)	(0.0051)	(0.0048)	(0.0049)	(0.0043)	(0.0062)	(0.0054)	(0.0046)	(0.0043)
Senior Secondary	0.1075*	-0.0797*	0.1215*	-0.0949*	0.0906*	-0.0606*	0.0886*	-0.0613*	0.1153*	-0.0846*
	(0.0040)	(0.0037)	(0.0058)	(0.0054)	(0.0055)	(0.0047)	(0.0064)	(0.0056)	(0.0055)	(0.0050)
Tertiary Education	0.1027*	-0.0762*	0.1487*	-0.1284*	0.0710*	-0.0443*	0.0740*	-0.0520*	0.1430*	-0.1066*
	(0.0059)	(0.0053)	(0.0099)	(0.0094)	(0.0072)	(0.0062)	(0.0076)	(0.0065)	(0.0103)	(0.0096)
Household Head's Employment										
Employer	0.0130*	-0.0275*	0.0197*	-0.0388*	-0.0039	-0.0121*	-0.0020	-0.0101*	-0.0171*	-0.0358*
	(0.0020)	(0.0019)	(0.0029)	(0.0027)	(0.0027)	(0.0024)	(0.0033)	(0.0029)	(0.0026)	(0.0025)
Employee	0.0126*	-0.0128*	0.0107**	-0.0115**	0.0134*	-0.0131*	0.0198*	-0.0168*	0.0009	-0.0034
	(0.0027)	(0.0026)	(0.0041)	(0.0039)	(0.0035)	(0.0032)	(0.0031)	(0.0028)	(0.0042)	(0.0041)
Casual Worker	-0.0195*	0.0157*	-0.0275*	0.0230*	-0.0105**	0.0071***	-0.0136**	0.0096**	-0.0218*	0.0192*
	(0.0030)	(0.0029)	(0.0043)	(0.0042)	(0.0040)	(0.0038)	(0.0041)	(0.0037)	(0.0040)	(0.0039)

Table 4-7: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
	-0.0147***	0.0373*	-0.0287**	0.0498*	0.0005	0.0232**	0.0042	-0.0153	-0.0223**	0.0569*
Unpaid Worker	(0.0081)	(0.0075)	(0.0115)	(0.0115)	(0.0113)	(0.0092)	(0.0147)	(0.0127)	(0.0101)	(0.0097)
	-0.0144*	0.0166*	-0.0204*	0.0226*	-0.0077	0.0103**	0.0012	0.0004	-0.0272*	00310*
Others	(0.0039)	(0.0038)	(0.0057)	(0.0056)	(0.0053)	(0.0048)	(0.0049)	(0.0043)	(0.0056)	(0.0056)
Spouse's Characteristics										
Spouse's Education										
Completed Primary	0.0339*	-0.0238*	0.0329*	-0.0235*	0.0339*	-0.0232*	0.0246*	-0.0105**	0.0386*	-0.0290*
	(0.0026)	(0.0024)	(0.0037)	(0.0035)	(0.0035)	(0.0032)	(0.0048)	(0.0043)	(0.0032)	(0.0030)
Junior Secondary	0.0869*	-0.0532*	0.0942*	-0.0599*	0.0769*	-0.0447*	0.0590*	-0.0324*	0.1018*	-0.0621*
	(0.0035)	(0.0032)	(0.0050)	(0.0047)	(0.0047)	(0.0042)	(0.0056)	(0.0050)	(0.0046)	(0.0043)
Senior Secondary	0.1101*	-0.0749*	0.1213*	-0.0914*	0.0955*	-0.0553*	0.0786*	-0.0493*	0.1321*	-0.0857*
	(0.0043)	(0.0039)	(0.0063)	(0.0059)	(0.0057)	(0.0050)	(0.0061)	(0.0054)	(0.0065)	(0.0057)
Tertiary Education	0.0963*	-0.0575*	0.1512*	-0.1102*	0.0658*	-0.0329*	0.0711*	-0.0337*	0.1275*	-0.0949*
	(0.0068)	(0.0061)	(0.0123)	(0.0115)	(0.0081)	(0.0069)	(0.0078)	(0.0067)	(0.0127)	(0.0119)
Spouse's Employment										
Employer	-0.0112**	0.0503*	-0.0015	0.0401*	-0.0207*	0.0569*	-0.0185*	0.0527*	-0.0066	0.0468*
	(0.0037)	(0.0033)	(0.0054)	(0.0050)	(0.0048)	(0.0040)	(0.0052)	(0.0044)	(0.0049)	(0.0045)
Employee	-0.0070	-0.0032	-0.0042	-0.0048	-0.0108**	-0.0026	-0.0052	0.0012	-0.0133**	0.0116
	(0.0043)	(0.0039)	(0.0063)-	(0.0060)	(0.0055)	(0.0047)	(0.0047)	(0.0041)	(0.0065)	(0.0061)
Casual Worker	-0.0366*	0.0401*	0.0391*	0.0447*	-0.0338*	0.00336*	-0.0252**	0.0320*	-0.0402*	0.0418*
	(0.0046)	(0.0043)	(0.0066)	(0.0065)	(0.0061)	(0.0054)	(0.0073)	(0.0065)	(0.0060)	(0.0057)
Unpaid Worker	-0.0124*	0.0336*	-0.0096**	0.0392*	-0.0163*	0.0283*	-0.0057	0.0201*	-0.0123**	0.0332*
	(0.0031)	(0.0028)	(0.0045)	(0.0042)	(0.0042)	(0.0036)	(0.0053)	(0.0046)	(0.0041)	(0.0038)
Others	-0.0035	-0.0185*	-0.0031	-0.0127**	-0.0050	-0.0244*	-0.0029	-0.0033	-0.0037	-0.0281*
	(0.0027)	(0.0025)	(0.0039)	(0.0037)	(0.0036)	(0.0031)	(0.0034)	(0.0030)	(0.0038)	(0.0035)
Income (Rp.)										
Household Income	0.0250*	-0.0259*	0.0310*	-0.0270*	0.0164**	-0.0232*	0.0255*	-0.0259*	0.0151***	-0.0125**
	(0.0050)	(0.0043)	(0.0073)	(0.0065)	(0.0065)	(0.0054)	(0.0055)	(0.0048)	(0.0082)	(0.0070)
Square of HH Income	-0.0074**	0.0062**	-0.0063	0.0048	-0.0069***	0.0061**	-0.0083**	0.0078**	-0.0048	0.00005
	(0.0028)	(0.0022)	(0.0039)	(0.0032)	(0.0038)	(0.0028)	(0.0029)	(0.0026)	(0.0051)	(0.0036)

Table 4-7: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Household Characteristics										
Birth Order	-0.0293*	0.0330*	-0.0363*	0.0420*	-0.0217*	0.0234*	-0.0240*	0.0205*	-0.0324*	0.0408*
	(0.0024)	(0.0022)	(0.0035)	(0.0033)	(0.0032)	(0.0027)	(0.0036)	(0.0031)	(0.0031)	(0.0029)
Child Aged 0-5 years	0.0134*	-0.0159*	0.0191*	-0.0214*	0.0079**	-0.0111*	0.0049	-0.0047	0.0192*	-0.0243*
	(0.0027)	(0.0024)	(0.0039)	(0.0036)	(0.0036)	(0.0031)	(0.0039)	(0.0034)	(0.0035)	(0.0032)
Child Aged 6-9 years	0.0188*	-0.0214*	0.0245*	-0.0279*	0.0127*	-0.0143*	0.0120**	-0.0115**	0.0229*	-0.0286*
	(0.0027)	(0.0024)	(0.0039)	(0.0036)	(0.0036)	(0.0031)	(0.0040)	(0.0035)	(0.0035)	(0.0032)
Child Aged 10-14 years	0.0147*	-0.0177*	0.0188*	-0.0241*	0.0104**	-0.0107*	0.0153*	-0.0127*	0.0145*	-0.0212*
	(0.0024)	(0.0022)	(0.0035)	(0.0033)	(0.0032)	(0.0027)	(0.0036)	(0.0032)	(0.0031)	(0.0029)
Child Aged 15-17 years	-0.0001	-0.0059*	-0.00001	-0.0090*	-0.0005	-0.0020	-0.0008	-0.0020	0.0006	-0.0088*
	(0.0015)	(0.0015)	(0.0023)	(0.0022)	(0.0021)	(0.0018)	(0.0023)	(0.0021)	(0.0020)	(0.0019)
Number of Adults	0.0044*	-0.0073*	0.0067*	-0.0105*	0.0016	-0.0036*	0.0023**	-0.0039*	0.0055*	-0.0094*
	(0.0008)	(0.0007)	(0.0011)	(0.0011)	(0.0010)	(0.0009)	(0.0011)	(0.0009)	(0.0010)	(0.0010)
Rural	-0.0223*	0.0234*	-0.0267*	0.0338*	-0.0175*	0.0124*	-	-	-	-
	0.0019)	(0.0018)	(0.0028)	(0.0027)	(0.0025)	(0.0022)				
Land Ownerships										
Privately Owned: Paddy	0.0031	-0.0053	0.0002	-0.0051	0.0091	-0.0090	-0.0039	-0.0213	0.0056	-0.0045
Privately Owned:	(0.0073)	(0.0051)	(0.0100)	(0.0070)	(0.0112)	(0.0071)	(0.0129)	(0.0133)	(0.0092)	(0.0062)
Dryland	0.0016	0.0014	0.0056	0.0009	-0.0024	0.0011	-0.0020	0.0069	0.0019	0.0003
Privately Owned but	(0.0039)	(0.0030)	(0.0065)	(0.0044)	(0.0044)	(0.0038)	(0.0116)	(0.0071)	(0.0045)	(0.0036)
managed by others (both	0.0378***	-0.0031	0.0299	0.0104	0.0405***	-0.0112	0.0472	-0.0017	0.0362	-0.0048
paddy and dryland)	(0.0198)	(0.0098)	(0.0307)	0.0149)	(0.0231)	(0.0125)	(0.0380)	(0.0191)	(0.0236)	(0.0124)
Province										
NAD	0.0930*	-0.0671*	0.0887*	-0.0564*	0.0948*	-0.0737*	0.0158	-0.0140	0.1190*	-0.0830*
	(0.0065)	(0.0058)	(0.0096)	(0.0087)	(0.0084)	(0.0072)	(0.0156)	(0.0130)	(0.0079)	(0.0072)
North Sumatera	0.0493*	-0.0036	0.0401*	0.0417***	0.0570*	-0.0195**	-0.0006	0.0100	0.0658*	-0.00003
	(0.0057)	(0.0050)	(0.0086)	(0.0077)	(0.0073)	(0.0060)	(0.0144)	(0.0119)	(0.0071)	(0.0063)
West Sumatera	0.0453*	-0.0481*	0.0236**	-0.0268**	0.0668*	-0.0661*	-0.0054	0.0003	0.0607*	-0.0612*
	(0.0064)	(0.0058)	(0.0094)	(0.0088)	(0.0083)	(0.0073)	(0.0150)	(0.0125)	(0.0079)	(0.0075)
Riau	0.0719*	-0.0638*	0.0729*	-0.0564*	0.0694*	-0.0700*	0.0090	-0.0141	0.0930*	-0.0784*
	(0.0071)	(0.0065)	(0.0103)	(0.0097)	(0.0092)	(0.0082)	(0.0160)	(0.0134)	(0.0087)	(0.0082)

Table 4-7: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Province										
Jambi	0.0447*	-0.0535*	0.0370*	-0.04808	0.0504*	-0.0551*	-0.0165	0.0013	0.0618*	-0.0689*
	(0.0069)	(0.0063)	(0.0102)	(0.0096)	(0.0090)	(0.0078)	(0.0164)	(0.0140)	(0.0084)	(0.0079)
South Sumatera	0.0406*	-0.0612*	0.0238**	-0.0465*	0.0594*	-0.0748*	-0.0071	-0.0027	0.0545*	-0.0803*
	(0.0063)	(0.0058)	(0.0092)	(0.0086)	(0.0083)	(0.0074)	(0.0150)	(0.0127)	(0.0078)	(0.0073)
Bengkulu	0.0527*	-0.0715*	0.0354**	-0.0535*	0.0716*	-0.0904*	0.0117	-0.0034	0.0655*	-0.0912*
	(0.0070)	(0.0065)	(0.0102)	(0.0097)	(0.0094)	(0.0086)	(0.0179)	(0.0153)	(0.0084)	(0.0080)
Lampung	0.0475*	-0.0412*	0.0447*	-0.0242**	0.0506*	-0.0600*	-0.0019	0.0087	0.0623*	-0.0551*
	(0.0068)	(0.0061)	(0.0099)	(0.0091)	(0.0087)	(0.0078)	(0.0159)	(0.0133)	(0.0082)	(0.0076)
Bangka-Belitung	-0.0032	0.0037	-0.0315**	0.0364*	0.0280**	-0.0320*	-0.0293***	0.0321***	-0.0001	0.0068
	(0.0076)	(0.0069)	(0.0111)	(0.0102)	(0.0102)	(0.0090)	(0.0159)	(0.0133)	(0.0097)	(0.0091)
Riau Islands	0.0457*	-0.0232**	0.0422**	-0.0082	0.0490*	-0.0379**	-0.0058	0.0166	0.0739*	-0.0416**
	(0.0099)	(0.0087)	(0.0145)	(0.0131)	(0.0130)	(0.0111)	(0.0163)	(0.0135)	(0.0152)	(0.0139)
DKI Jakarta	0.0274**	-0.0098	0.0668*	-0.0452*	0.0086	-0.0006	-0.0100	0.0181	-	-
	(0.0079)	(0.0070)	(0.0132)	(0.0120)	(0.0092)	(0.0077)	(0.0145)	(0.0120)		
West Java	-0.0166**	-0.0259*	-0.0175**	-0.00248**	-0.0151**	-0.0255*	-0.0369**	0.0133	-0.0234**	-0.0363*
	(0.0056)	(0.0052)	(0.0084)	(0.0080)	(0.0070)	(0.0062)	(0.0141)	(0.0118)	(0.0071)	(0.0068)
Central Java	0.0474*	-0.0423*	0.0497*	-0.0443*	0.0435*	-0.0385*	0.0030	0.0030	0.0587*	-0.0546*
	(0.0056)	(0.0051)	(0.0084)	(0.0078)	(0.0071)	(0.0061)	(0.0143)	(0.0118)	(0.0069)	(0.0065)
DIY	0.1128*	-0.0752*	0.1274*	-0.0714*	0.0953*	-0.0763*	0.0361***	-0.0040	0.1481*	-0.1093*
	(0.0126)	(0.0101)	(0.0185)	(0.0151)	(0.0161)	(0.0124)	(0.0188)	(0.0150)	(0.0182)	(0.0147)
East Java	0.0479*	-0.0417*	0.0463*	-0.0288*	0.0480*	-0.0531*	0.0049	0.0021	0.0580*	-0.0524*
	(0.0056)	(0.0051)	(0.0084)	(0.0077)	(0.0071)	(0.0062)	(0.0143)	(0.0119)	(0.0069)	(0.0064)
Banten	-0.0038	-0.0413*	-0.0043	-0.0510*	-0.0021	-0.00326*	-0.0186	0.0028	-0.0133	-0.0520*
	(0.0068)	(0.0068)	(0.0101)	(0.0105)	(0.0086)	(0.0079)	(0.0151)	(0.0129)	(0.0087)	(0.0091)
Bali	0.0210**	0.0015	0.0261**	0.0012	0.0169***	-0.0011	-0.0131	0.0263**	0.0276**	0.0027
	(0.0074)	(0.0066)	(0.0114)	(0.0103)	(0.0091)	(0.0076)	(0.0158)	(0.0131)	(0.0095)	(0.0086)
West Nusa Tenggara	0.0623*	-0.0390*	0.0532*	-0.0234**	0.0706*	-0.0529*	0.0013	0.0110	0.0853*	-0.0549*
	(0.0070)	(0.0064)	(0.0104)	(0.0096)	(0.0091)	(0.0080)	(0.0153)	(0.0130)	(0.0090)	(0.0083)
East Nusa Tenggara	0.0166**	-0.0201*	0.0015	-0.0052	0.0311*	-0.0319*	0.0081	-0.0072	0.0174**	-0.0221**
	(0.0059)	(0.0053)	(0.0088)	(0.0081)	(0.0076)	(0.0066)	(0.0160)	(0.0134)	(0.0071)	(0.0065)
West Kalimantan	0.0368*	-0.0298*	0.0259**	-0.0190**	0.0469*	-0.0390*	0.0007	0.0060	0.0448*	-0.0369*
	(0.0063)	(0.0056)	(0.0095)	(0.0085)	(0.0081)	(0.0068)	(0.0156)	(0.0129)	(0.0077)	(0.0069)
Central Kalimantan	0.0686*	-0.0521*	0.0744*	-0.0469*	0.0609*	-0.0558*	0.0205	-0.0069	0.0481*	-0.0651*
	(0.0066)	(0.0059)	(0.0098)	(0.0089)	(0.0084)	(0.0073)	(0.0161)	(0.0134)	(0.0079)	(0.0073)

Table 4-7: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
South Kalimantan	-0.0001	-0.0245*	-0.0194**	-0.0079	0.0205**	-0.0396*	-0.0216	0.0181	0.0021	-0.0342*
	(0.0065)	(0.0060)	(0.0096)	(0.0090)	(0.0085)	(0.0075)	(0.0155)	(0.0130)	(0.0079)	(0.0075)
East Kalimantan	0.0483*	-0.0438*	0.0448*	-0.0273**	0.0508*	-0.0596*	-0.0062	0.0055	0.0744*	-0.0649*
	(0.0071)	(0.0063)	(0.0105)	(0.0095)	(0.0091)	(0.0081)	(0.0149)	(0.0125)	(0.0096)	(0.0087)
North Sulawesi	0.0100	-0.0278*	-0.0053	-0.0064	0.0242**	-0.0466*	-0.0155**	0.0310**	0.0337**	-0.0506*
	(0.0078)	(0.0073)	(0.0115)	(0.0108)	(0.0103)	(0.0097)	(0.0157)	(0.0133)	(0.0103)	(0.0100)
Central Sulawesi	0.0214**	-0.0141**	-0.0025	0.0165***	0.0499*	-0.0517*	-0.0042	0.0104	0.0270**	-0.0175**
	(0.0068)	(0.0061)	(0.0098)	(0.0089)	(0.0094)	(0.0084)	(0.0171)	(0.0142)	(0.0082)	(0.0075)
South Sulawesi	0.0078	-0.0163**	-0.0173**	0.0157**	0.0352*	-0.0521*	-0.0327**	0.0154	0.0168**	-0.0217**
	(0.0056)	(0.0050)	(0.0083)	(0.0076)	(0.0072)	(0.0064)	(0.0144)	(0.0121)	(0.0068)	(0.0063)
Southeast Sulawesi	0.0473*	-0.0250*	0.0344*	-0.0010	0.0588*	-0.0475*	0.0376**	-0.0103	0.0480*	-0.0248**
	(0.0065)	(0.0058)	(0.0096)	(0.0088)	(0.0084)	(0.0073)	(0.0164)	(0.0133)	(0.0079)	(0.0072)
Gorontalo	-0.0344*	-0.0040	-0.0523*	0.0250**	-0.0160	-0.0322**	-0.0283	0.0158	-0.0431*	-0.0051
	(0.0080)	(0.0078)	(0.0121)	(0.0117)	(00101)	(0.0101)	(0.0172)	(0.0152)	(0.0101)	(0.0099)
Maluku	0.0765*	-0.0819*	0.0731*	-0.0727*	0.0772*	-0.0861*	0.0360***	-0.0326***	0.0890*	-0.0964*
	(0.0083)	(0.0078)	(0.0123)	(0.0118)	(0.0105)	(0.0099)	(0.0194)	(0.0169)	(0.0100)	(0.0096)
North Maluku	0.0728*	-0.0899*	0.0728*	-0.0981*	0.0707*	-0.0787*	0.0685*	-0.0386**	0.0755*	-0.1051*
	(-0.0082)	(0.0078)	(0.0123)	0.(0119)	(0.0103)	(0.0095)	(0.0191)	(0.0160)	(0.0100)	(0.0098)
ρ	-0.8478*		-0.8478*		-0.8456*		-0.8497*		-0.8294*	
	(0.0028)		(0.0036)		(0.0045)		(0.0043)		(0.0035)	
Wald Test Chi^2	25934.6*		15669.6*		10149.9*		6392.9*		19679.7*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	15879.7*		9566.4*		6049.96*		4511.16*		11117.9*	
Log-likelihood	-69272.155		-40793.852		-27888.487		-17503.412		-51162.087	
Number of Observations	155,660		82,639		73,021		54,816		100,844	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Table 4-8: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children by Region and Gender, SUSENAS 2005.

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Age Groups								
10 to 12 years	0.0791*	-0.0593*	0.0732*	-0.0498*	0.1467*	-0.1081*	0.1082*	-0.0603*
	(0.0054)	(0.0052)	(0.0052)	(0.0049)	(0.0044)	(0.0043)	(0.0042)	(0.0037)
15 to 17 years	-0.0841*	0.0791*	-0.0623*	0.0610*	-0.1471*	0.1381*	-0.0957*	0.0801*
	(0.0039)	(0.0037)	(0.0037)	(0.0034)	(0.0034)	(0.0034)	(0.0032)	(0.0030)
Child Characteristics								
Biological Child	0.0548*	-0.0462*	0.1004*	-0.0938*	0.0343*	-0.0298*	0.0434*	-0.0436*
	(0.0054)	(0.0046)	(0.0041)	(0.0036)	(0.0061)	(0.0059)	(0.0053)	(0.0046)
Household Head's Characteristics								
Age	0.0007*	-0.0008*	0.0011*	-0.0009*	0.0004**	0.0002	0.0012*	-0.0007*
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Female Headed	-0.0654**	0.0317	-0.0901**	0.0626**	-0.0470	-0.0395	-0.0079	-0.0368
	(0.0316)	(0.0280)	(0.0301)	(0.0251)	(0.0406)	(0.0490)	(0.0363)	(0.0398)
Household Head's Education								
Completed Primary	0.0233**	-0.0157**	0.0336*	-0.0217**	0.0395*	-0.0412*	0.0269*	-0.0248*
	(0.0077)	(0.0067)	(0.0079)	(0.0068)	(0.0052)	(0.0050)	(0.0048)	(0.0044)
Junior Secondary	0.0712*	-0.0490*	0.0726*	-0.0476*	0.1097*	-0.0912*	0.0714*	-0.0500*
	(0.0086)	(0.0074)	(0.0087)	(0.0076)	(0.0066)	(0.0064)	(0.0061)	(0.0055)
Senior Secondary	0.0910*	-0.0629*	0.0841*	-0.0559*	0.1327*	-0.1060*	0.0948*	-0.0599*
	(0.0089)	(0.0078)	(0.0090)	(0.0077)	(0.0079)	(0.0074)	(0.0075)	(0.0063)
Tertiary Education	0.0991*	-0.0804*	0.0617*	-0.0381*	0.1867*	-0.1493*	0.0982*	-0.0650*
	(0.0118)	(0.0105)	(0.0101)	(0.0086)	(0.0159)	(0.0149)	(0.0128)	(0.0114)
Household Head's Employment								
Employer	-0.0118**	0.0209*	0.0099**	-0.0036	-0.0243*	0.0493*	-0.0078**	0.0180*
	(0.0047)	(0.0041)	(0.0046)	(0.0040)	(0.0037)	(0.0037)	(0.0034)	(0.0031)
Employee	0.0207*	-0.0177*	0.0186*	-0.0162*	-0.0032	0.0012	0.0049	-0.0073
	(0.0046)	(0.0040)	(0.0041)	(0.0038)	(0.0062)	(0.0062)	(0.0055)	(0.0051)
Casual Worker	-0.0157**	0.0114**	-0.0113**	0.0078	-0.0326*	0.0299*	-0.0099***	0.0064
	(0.0058)	(0.0051)	(0.0057)	(0.0053)	(0.0057)	(0.0059)	(0.0053)	(0.0050)
Unpaid Worker	-0.0184	0.0069	0.0315	-0.0408**	-0.0354**	0.0693*	-0.0081	0.0408*
	(0.0204)	(0.0162)	(0.0215)	(0.0198)	(0.0142)	(0.0153)	(0.0139)	(0.0112)

Table 4-8: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Others	-0.0050	0.0063	0.0069	-0.0057	-0.0323*	0.0367*	-0.0199**	0.0236**
	(0.0069)	(0.0062)	(0.0069)	(0.0057)	(0.0082)	(0.0083)	(0.0076)	(0.0071)
Spouse's Characteristics								
Spouse's Education								
Completed Primary	0.0298*	-0.0140**	0.0189**	-0.00081	0.0365*	-0.0281*	0.0397*	-0.0283*
	(0.0065)	(0.0058)	(0.0069)	(0.0061)	(0.0046)	(0.0044)	(0.0043)	(0.0039)
Junior Secondary	0.0715*	-0.0426*	0.0442*	-0.0214**	0.1088*	-0.0684*	0.0918*	-0.0532*
	(0.0078)	(0.0068)-	(0.0080)	(0.0070)	(0.0067)	(0.0063)	(0.0062)	(0.0055)
Senior Secondary	0.0930*	0.0627*	0.0624*	-0.0352*	0.1408*	-0.1030*	0.1194*	-0.0624*
	(0.0085)	(0.0075)	(0.0086)	(0.0074)	(0.0093)	(0.0087)	(0.0089)	(0.0071)
Tertiary Education	0.1236*	-0.0784*	0.0435*	-0.0128	0.1603*	-0.1164*	0.0978*	-0.0740*
	(0.0134)	(0.0116)	(0.0102)	(0.0086)	(0.0199)	(0.0193)	(0.0153)	(0.0136)
Spouse's Employment								
Employer	-0.0087	0.0443*	-0.0274*	0.0585*	0.0030	0.0354*	-0.0159**	0.0535*
	(0.0078)	(0.0066)	(0.0069)	(0.0057)	(0.0072)	(0.0069)	(0.0064)	(0.0054)
Employee	-0.0051	0.0063	-0.0073	-0.0031	-0.0046	-0.0113	-0.0214**	0.0115
	(0.0070)	(0.0061)	(0.0063)	(0.0054)	(0.0095)	(0.0093)	(0.0086)	(0.0073)
Casual Worker	-0.0240**	0.0324*	-0.0268**	0.0304*	-0.0436*	0.0472*	-0.0361*	0.0338*
	(0.0105)	(0.0093)	(0.0098)	(0.0086)	(0.0086)	(0.0087)	(0.0080)	(0.0069)
Unpaid Worker	0.0008	0.0232*	-0.0167**	0.0205**	-0.0110***	0.0404*	-0.0143**	0.0256*
	(0.0077)	(0.0065)	(0.0073)	(0.0063)	(0.0059)	(0.0057)	(0.0055)	(0.0047)
Others	-0.0033	0.0045	-0.0047	-0.0100**	-0.0017	-0.0249*	-0.0061	-0.0328*
	(0.0048)	(0.0042)	0.0047)	(0.0041)	(0.0054)	(0.0053)	(0.0051)	(0.0044)
Income (Rp.)								
Household Income	0.0289*	-0.0268*	0.0205**	-0.0233*	0.0245**	0.0106	-0.0040	0.0142
	(0.0079)	(0.0072)	(0.0073)	(0.0061)	(0.0117)	(0.0104)	(0.0115)	(0.0094)
Square of HH Income	-0.0071***	0.0066***	-0.0083**	0.0073**	-0.0067	0.0024	0.0024	-0.0017
	(0.0040)	(0.0039)	(0.0039)	(0.0032)	(0.0067)	(0.0052)	(0.0078)	(0.0053)
Household Characteristics								
Birth Order	-0.0309*	0.0267*	-0.0174*	0.0154*	-0.0382*	0.0496*	-0.0253*	0.0302*
	(0.0051)	(0.0046)	(0.0049)	(0.0041)	(0.0046)	(0.0044)	(0.0042)	(0.0036)
Child Aged 0-5 years	0.0112**	-0.0094***	-0.0005	-0.0022	0.0227*	-0.0281*	0.0148**	-0.0196*
	(0.0056)	(0.0050)	(0.0054)	(0.0046)	(0.0051)	(0.0048)	(0.0047)	(0.0041)

Table 4-8: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Household Characteristics								
Child Aged 6-9 years	0.0149**	-0.0154**	0.0103***	-0.0093**	0.0282*	-0.0344*	0.0162**	-0.0211*
	(0.0057)	(0.0051)	(0.0055)	(0.0046)	(0.0051)	(0.0048)	(0.0047)	(0.0041)
Child Aged 10-14 years	0.0193*	-0.0162**	0.0109**	-0.0095**	0.0179*	-0.0281*	0.0110**	-0.0137*
	(0.0053)	(0.0047)	(0.0050)	(0.0042)	(0.0045)	(0.0044)	(0.0041)	(0.0036)
Child Aged 15-17 years	-0.0014	-0.0022	-0.0004	-0.0016	0.0009	-0.0131*	-0.0001	-0.0035
	(0.0033)	(0.0030)	(0.0032)	(0.0028)	(0.0030)	(0.0030)	(0.0027)	(0.0024)
Number of Adults	0.0034**	-0.0057*	0.0012	-0.0022***	0.0081*	-0.0129*	0.0021	-0.0049*
	(0.0015)	(0.0013)	(0.0014)	(0.0012)	(0.0015)	(0.0015)	(0.0014)	(0.0013)
Land Ownerships								
Privately Owned: Paddy	0.0275	-0.0495***	-0.0129	-0.0125	-0.0022	-0.0030	0.0261	-0.0079
Privately Owned:	(0.0271)	(0.0282)	(0.0131)	(0.0111)	(0.0116)	(0.0083)	(0.0162)	(0.0092)
Dryland	0.0005	0.0058	-0.0029	0.0050	0.0056	0.0005	-0.0020	-0.0009
Privately Owned but	(0.0271)	(0.0118)	(0.0097)	(0.0090)	(0.0074)	(0.0055)	(0.0050)	(0.0046)
managed by others (both	0.0788	0.0304	0.0372	-0.1070	0.0243	0.0058	0.0414	-0.0074
paddy and dryland)	(0.0655)	(0.0281)	(0.0367)	(0.0735)	(0.0359)	(0.0196)	(0.0278)	(0.0145)
Province								
NAD	0.0393***	-0.0377**	-0.0266	0.0231	0.1142*	-0.0679*	0.1198*	-0.0909*
	(0.0201)	(0.0169)	(0.0252)	(0.0225)	(0.0117)	(0.0111)	(0.0102)	(0.0087)
North Sumatera	0.0265	-0.0097	-0.0496**	0.0436**	0.0527*	0.0232**	0.0768*	-0.0210**
	(0.0186)	(0.0154)	(0.0235)	(0.0209)	(0.0105)	(0.0098)	(0.0090)	(0.0073)
West Sumatera	0.0146	-0.0146	-0.0488**	0.0326	0.0323**	-0.0352**	0.0889*	-0.0811*
	(0.0195)	(0.0163)	(0.0241)	(0.0217)	(0.0116)	(0.0114)	(0.0104)	(0.0091)
Riau	0.0578**	-0.0656*	-0.0603**	0.0500**	0.0829*	-0.0555*	0.0995*	-0.0976*
	(0.0212)	(0.0179)	(0.0253)	(0.0223)	(0.0126)	(0.0124)	(0.0114)	(0.0105)
Jambi	0.0443**	-0.0462**	-0.0988*	0.0670**	0.0390**	-0.0522*	0.0839*	-0.0793*
	(0.0225)	(0.0190)	(0.0253)	(0.0227)	(0.0123)	(0.0120)	(0.0109)	(0.0095)
South Sumatera	0.0167	-0.0235	-0.0508**	0.0288	0.0308**	-0.0612*	0.0794*	-0.0938*
	(0.0194)	(0.0165)	(0.0243)	(0.0222)	(0.0113)	(0.0109)	(0.0103)	(0.0090)
Bengkulu	0.0407***	-0.0241	-0.0368	0.0288	0.0381**	-0.0648*	0.0930*	-0.1142*
	(0.0237)	(0.0207)	(0.0281)	(0.0246)	(0.0122)	(0.0119)	(0.0112)	(0.0103)

Table 4-8: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Lampung	0.0433**	-0.0245	-0.0648**	0.0525**	0.0491*	-0.0252**	0.0740*	-0.0841*
	(0.0209)	(0.0181)	(0.0250)	(0.0222)	(0.0121)	(0.0114)	(0.0107)	(0.0098)
Bangka-Belitung	0.0025	0.0043	-0.0820**	0.0520**	-0.0477**	0.0547*	0.0515*	-0.04138
	(0.0209)	(0.0174)	(0.0253)	(0.0228)	(0.0141)	(0.0136)	(0.0133)	(0.0117)
Riau Islands	0.0380***	-0.0100	-0.0730**	0.0569**	0.0495**	-0.0183	0.1017*	-0.0596**
	(0.0217)	(0.0179)	(0.0255)	(0.0226)	(0.0216)	(0.0201)	(0.0216)	(0.0184)
DKI Jakarta	0.0578**	-0.0407**	-0.0884*	0.0805*	-	-	-	-
	(0.0193)	(0.0160)	(0.0233)	(0.0208)				
West Java	0.0066	-0.0250	-0.1028*	0.0674**	-0.0334**	-0.0272***	-0.0117	-0.0413*
	(0.0181)	(0.0153)	(0.0231)	(0.0208)	(0.0105)	(0.0105)	(0.0089)	(0.0080)
Central Java	0.0549**	-0.0398**	-0.0717**	0.0612**	0.0485*	-0.0472*	0.0672*	-0.0562*
	(0.0185)	(0.0154)	(0.0232)	(0.0208)	(0.0102)	(0.0099)	(0.0088)	(0.0075)
DIY	0.0919**	-0.0381***	-0.0411	0.0439***	0.1498*	-0.0967*	0.1401*	-0.1125*
	(0.0266)	(0.0200)	(0.0276)	(0.0242)	(0.0256)	(0.0219)	(0.0254)	(0.0184)
East Java	0.0496**	-0.0302***	-0.0632**	0.0497**	0.0459*	-0.0288**	0.0683*	-0.0724*
	(0.0184)	(0.0154)	(0.0233)	(0.0209)	(0.0102)	(0.0098)	(0.0088)	(0.0077)
Banten	0.0309	-0.0444**	-0.0876*	0.0611**	-0.0269**	-0.0527*	0.0008	-0.0464*
	(0.0199)	(0.0175)	(0.0241)	(0.0215)	(0.0130)	(0.0140)	(0.0111)	(0.0106)
Bali	0.0220	-0.0046	-0.0707**	0.0728**	0.0335**	0.0015	0.0243**	-0.0024
	(0.0209)	(0.0175)	(0.0250)	(0.0220)	(0.0146)	(0.0137)	(0.0116)	(0.0097)
West Nusa Tenggara	0.0327	-0.0197	-0.0516**	0.0577**	0.0723*	-0.0297**	0.0966*	-0.0767*
	(0.0199)	(00170)	(0.0247)	(0.0221)	(0.0133)	(0.0127)	(0.0116)	(0.0102)
East Nusa Tenggara	0.0242	-0.0142	-0.0301	0.0122	-0.0039	-0.0028	0.0385*	-0.0369*
	(0.0208)	(0.0174)	(0.0259)	(0.0231)	(0.0105)	(0.0100)	(0.0090)	(0.0077)
West Kalimantan	0.0375***	-0.0328***	-0.0584**	0.0577**	0.0253**	-0.01964	0.0630*	-0.0533*
	(0.0206)	(0.0172)	(0.0247)	(0.0217)	(0.0115)	(0.0107)	(0.0098)	(0.0081)
Central Kalimantan	0.0684**	-0.0433**	-0.0490***	0.0442**	0.0824*	-0.0518*	0.0824*	-0.0736*
	(0.0217)	(0.0183)	(0.0251)	(0.0223)	(0.0117)	(0.0111)	(0.0101)	(0.0088)
South Kalimantan	-0.0004	-0.0035	-0.0622**	0.0540**	-0.0243**	-0.0102	0.0298**	-0.0542*
	(0.0202)	(0.0170)	(0.0249)	(0.0223)	(0.0116)	(0.0114)	(0.0103)	(0.0092)
East Kalimantan	0.0287	-0.0230	-0.0637**	0.0480**	0.0648*	-0.0363**	0.0817*	-0.0916*
	(0.0193)	(0.0163)	(0.0241)	(0.0215)	(0.0142)	(0.0130)	(0.0123)	(0.0114)
North Sulawesi	-0.0138	0.0056	-0.1141*	0.0738**	0.0044	-0.0196	0.0642*	-0.0783*
	(0.0206)	(0.0175)	(0.0249)	(0.0226)	(0.0150)	(0.0146)	(0.0139)	(0.0135)

Table 4-8: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Central Sulawesi	0.0193	-0.0032	-0.0559**	0.0432***	-0.0071	0.0244**	0.0677*	-0.0657*
	(0.0227)	(0.0188)	(0.0266)	(0.0237)	(0.0118)	(0.0111)	(0.0113)	(0.0101)
South Sulawesi	-0.0145	-0.0049	-0.0696**	0.0466**	-0.0165***	0.0227**	0.0522*	-0.0683*
	(0.0185)	(0.0157)	(0.0237)	(0.0212)	(0.0100)	(0.0095)	(0.0087)	(0.0077)
Southeast Sulawesi	0.0645**	-0.0336***	-0.0125	0.0280	0.0290**	0.0091	0.0656*	-0.0551*
	(0.0214)	(0.0178)	(0.0261)	(0.0224)	(0.0116)	(0.0110)	(0.0101)	(0.0088)
Gorontalo	0.0010	0.0007	-0.0847**	0.0498**	-0.0702*	0.0338**	-0.0135	-0.0413**
	(0.0230)	(0.0208)	(0.0264)	(0.0245)	(0.0152)	(0.0149)	(0.0125)	(0.0126)
Maluku	0.0612**	-0.0458**	-0.0136	-0.0018	0.0815*	-0.0852*	0.0935*	-0.0999*
	(0.0260)	(0.0220)	(0.0299)	(0.0286)	(0.0149)	(0.0148)	(0.0126)	(0.0116)
North Maluku	0.1600*	-0.1195*	-0.0272	0.0389***	0.0624*	-0.1006*	0.0868*	-0.1013*
	(0.0325)	(0.0283)	(0.0270)	(0.0234)	(0.0148)	(0.0147)	(0.0127)	(0.0119)
ρ	-0.8900*		-0.8952*		-0.8351*		-0.8208*	
	(0.0060)		(0.0065)		(0.0043)		(0.0060)	
Wald Test Chi^2	3496.5*		3161.8*		12308.2*		7314.8*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	2424.7*		1966.8*		7055.8*		3944.5*	
Log-likelihood	-9491.443		-7706.911		-31056.031		-19806.978	
Number of Observations	28,284		26,532		54,355		46,489	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Table 4-9: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years, SUSENAS 2005.

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Child Characteristics										
Girls	0.0135*	-0.0160*	-	-	-	-	0.0053**	-0.0018	0.0179*	-0.0241*
	(0.0013)	(0.0011)					(0.0017)	(0.0013)	(0.0017)	(0.0016)
Biological Child	0.0144*	-0.0160*	0.0116**	-0.0096**	0.0164*	-0.0205*	0.0243*	-0.0213*	0.0062	-0.0074**
	(0.0028)	(0.0025)	(0.0043)	(0.0040)	(0.0037)	(0.0029)	(0.0036)	(0.0024)	(0.0039)	(0.0037)
Household Head's Characteristics										
Age	-0.00003	0.0001	-0.0003**	0.0003**	0.0002***	-0.0002**	0.0002	-0.0002**	-0.0002	0.0003**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.0319**	0.0166	-0.0387	0.0144	-0.0265	0.0160	-0.0495**	0.0330**	-0.0040	-0.0230
	(0.0156)	(0.0147)	(0.0249)	(0.0246)	(0.0186)	(0.0161)	(0.0156)	(0.0103)	(0.0248)	(0.0260)
Household Head's Education										
Completed Primary	0.0166*	-0.0154*	0.0205*	-0.0175*	0.0122*	-0.0132*	0.0137**	-0.0050	0.0183*	-0.0196*
	(0.0024)	(0.0021)	(0.0035)	(0.0032)	(0.0031)	(0.0027)	(0.0042)	(0.0031)	(0.0030)	(0.0028)
Junior Secondary	0.0431*	-0.0264*	0.0526*	-0.0338*	0.0329*	-0.0181*	0.0368*	-0.0155*	0.0461*	-0.0307*
	(0.0031)	(0.0026)	(0.0046)	(0.0040)	(0.0040)	(0.0033)	(0.0049)	(0.0036)	(0.0040)	(0.0036)
Senior Secondary	0.0471*	-0.0289*	0.0570*	-0.0357*	0.0368*	-0.0215*	0.0353*	-0.0134*	0.0539*	-0.0357*
	(0.0034)	(0.0029)	(0.0051)	(0.0044)	(0.0045)	(0.0036)	(0.0050)	(0.0036)	(0.0048)	(0.0040)
Tertiary Education	0.0452*	-0.0299*	0.0593*	-0.0421*	0.0312*	-0.0190*	0.0308*	-0.0120**	0.0578*	-0.0400*
	(0.0053)	(0.0046)	(0.0082)	(0.0076)	(0.0066)	(0.0054)	(0.0061)	(0.0044)	(0.0089)	(0.0077)
Household Head's Employment										
Employer	-0.0025	0.0129*	-0.0069**	0.0190*	0.0022	0.0060**	0.0025	0.0030	-0.0047**	0.0188*
	(0.0017)	(0.0016)	(0.0025)	(0.0024)	(0.0023)	(0.0020)	(0.0028)	(0.0020)	(0.0022)	(0.0022)
Employee	0.0039***	-0.0035	0.0043	-0.0052	0.0034	-0.0022	0.0085**	-0.0058**	-0.0019	0.0010
	(0.0024)	(0.0023)	(0.0036)	(0.0036)	(0.0030)	(0.0029)	(0.0025)	(0.0020)	(0.0037)	(0.0037)
Casual Worker	-0.0071**	0.0051**	-0.0069***	0.0047	-0.0069**	0.0049	-0.0050	0.0002	-0.0078**	0.0083**
	(0.0025)	(0.0025)	(0.0037)	(0.0038)	(0.0032)	(0.0031)	(0.0032)	(0.0027)	(0.0034)	(0.0035)
Unpaid Worker	-0.0081	0.0314*	-0.0093	0.0416*	-0.0069	0.0210*	-0.0025	-0.0095	-0.0100	0.0471*
	(0.0065)	(0.0048)	(0.0099)	(0.0074)	(0.0083)	(0.0058)	(0.0114)	(0.0082)	(0.0083)	(0.0064)
Others	0.0018	0.0070**	0.0043	0.0082	-0.0001	0.0059	0.0099**	-0.0042	-0.0045	0.0164**
	(0.0036)	(0.0034)	(0.0055)	(0.0052)	(0.0047)	(0.0041)	(0.0045)	(0.0032)	(0.0052)	(0.0050)

Table 4-9: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics										
Spouse's Education										
Completed Primary	0.0176*	-0.0124*	0.0170*	-0.0130*	0.0181*	-0.0112*	0.0127**	-0.0048***	0.0201*	-0.0156*
	(0.0021)	(0.0019)	(0.0032)	(0.0029)	(0.0028)	(0.0026)	(0.0037)	(0.0028)	(0.0027)	(0.0026)
Junior Secondary	0.0457*	-0.0212*	0.0468*	-0.0243*	0.0440*	-0.0176*	0.0297*	-0.0112**	0.0544*	-0.0258*
	(0.0031)	(0.0026)	(0.0045)	(0.0039)	(0.0041)	(0.0033)	(0.0045)	(0.0032)	(0.0042)	(0.0035)
Senior Secondary	0.0567*	-0.0327*	0.0599*	-0.0374*	0.0526*	-0.0267*	0.0390*	-0.0184*	0.0660*	-0.0377*
	(0.0038)	(0.0031)	(0.0056)	(0.0047)	(0.0051)	(0.0040)	(0.0050)	(0.0035)	(0.0059)	(0.0045)
Tertiary Education	0.0469*	-0.0218*	0.0581*	-0.0348*	0.0390*	-0.0140**	0.0316*	-0.0122**	0.0594*	-0.0270*
	(0.0062)	(0.0053)	(0.0099)	(0.0092)	(0.0077)	(0.0059)	(0.0065)	(0.0046)	(0.0114)	(0.0090)
Spouse's Employment										
Employer	-0.0027	0.0315*	-0.0027	0.0262*	-0.0018	0.0335*	-0.0117**	0.0272*	0.0020	0.0311*
	(0.0032)	(0.0026)	(0.0047)	(0.0041)	(0.0042)	(0.0031)	(0.0043)	(0.0028)	(0.0043)	(0.0037)
Employee	-0.0003	-0.0059***	0.0042	-0.0098***	-0.0048	-0.0029	-0.0012	-0.0029	-0.0010	-0.0042
	(0.0037)	(0.0034)	(0.0056)	(0.0054)	(0.0048)	(0.0041)	(0.0039)	(0.0031)	(0.0058)	(0.0053)
Casual Worker	-0.0160*	0.0230*	-0.0182**	0.0295*	-0.0141**	0.0166*	-0.0137**	0.0185*	-0.0166**	0.0235*
	(0.0038)	(0.0034)	(0.0056)	(0.0053)	(0.0050)	(0.0042)	(0.0056)	(0.0038)	(0.0051)	(0.0048)
Unpaid Worker	-0.0005	0.0174*	0.0015	0.0210*	-0.0027	0.0140*	-0.0008	0.0096**	0.0007	0.0180*
	(0.0026)	(0.0023)	(0.0039)	(0.0035)	(0.0035)	(0.0028)	(0.0046)	(0.0030)	(0.0035)	(0.0032)
Others	0.0030	-0.0153*	0.0043	-0.0127*	0.0015	-0.0180*	0.0015	-0.0033	0.0038	-0.0223*
	(0.0023)	(0.0021)	(0.0034)	(0.0032)	(0.0030)	(0.0026)	(00028)	(0.0021)	(0.0032)	(0.0031)
Income (Rp.)										
Household Income	0.0066***	-0.0071***	0.0137**	-0.0111**	0.0005	0.0064	0.0075**	-0.0104**	-0.0053	0.0004
	(0.0040)	(0.0040)	(0.0060)	(0.0052)	(0.0055)	(0.0055)	(0.0036)	(0.0037)	(0.0085)	(0.0055)
Square of HH Income	-0.0016	0.0025	0.0025	0.0017	0.0008	-0.0049	0.0017	0.0044***	0.0038	0.0004
	(0.0021)	(0.0021)	(0.0030)	(0.0021)	(0.0030)	(0.0034)	(0.0014)	(0.0024)	(0.0060)	(0.0020)
Household Characteristics										
Birth Order	-0.0559*	0.0447*	-0.0629*	0.0550*	-0.0483*	0.0329*	-0.0370*	0.0209*	-0.0658*	0.0570*
	(0.0020)	(0.0017)	(0.0029)	(0.0025)	(0.0027)	(0.0021)	(0.0029)	(0.0020)	(0.0026)	(0.0023)
Child Aged 0-5 years	0.0505*	-0.0377*	0.0572*	-0.0462*	0.0433*	-0.0282*	0.0295*	-0.0166*	0.0618*	-0.0493*
	(0.0022)	(0.0018)	(0.0032)	(0.0028)	(0.0030)	(0.0023)	(0.0032)	(0.0022)	(0.0029)	(0.0025)
Child Aged 6-9 years	0.0514*	-0.0393*	0.0571*	-0.0473*	0.0452*	-0.0300*	0.0331*	-0.0185*	0.0610*	-0.0502*
	(0.0022)	(0.0018)	(0.0032)	(0.0028)	(0.0029)	(0.0023)	(0.0032)	(0.0023)	(0.0029)	(0.0025)

Table 4-9: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Household Characteristics										
Child Aged 10-14 years	0.0257*	-0.0187*	0.0289*	-0.0240*	0.0223*	-0.0129*	0.0191*	-0.0093*	0.0293*	-0.0239*
	(0.0017)	(0.0015)	(0.0026)	(0.0022)	(0.0023)	(0.0018)	(0.0026)	(0.0018)	(0.0023)	(0.0020)
Child Aged 15-17 years	-0.0034**	-0.0023**	-0.0034**	-0.0036**	-0.0033**	-0.0007	-0.0038**	0.0002	-0.0029**	-0.0042**
	(0.0011)	(0.0010)	(0.0016)	(0.0016)	(0.0014)	(0.0013)	(0.0015)	(0.0012)	(0.0015)	(0.0014)
Number of Adults	0.0011***	-0.0032*	0.0021**	-0.0055*	0.0002	-0.0007	0.0004	-0.0020**	0.0016***	-0.0039*
	(0.0007)	(0.0006)	(0.0010)	(0.0010)	(0.0009)	(0.0008)	(0.0009)	(0.0007)	(0.0009)	(0.0009)
Rural	-0.0059*	0.0145*	-0.0080**	0.0223*	-0.0038***	0.0069*	-	-	-	-
	(0.0017)	(0.0016)	(0.0025)	(0.0025)	(0.0021)	(0.0020)				
Land Ownerships										
Privately Owned: Paddy	-0.0008	-0.0061	-0.0053	-0.0073	0.0092	-0.0064	0.0126	-0.0140	-0.0023	0.0070
Privately Owned:	(0.0049)	(0.0038)	(0.0062)	(0.0056)	(0.0091)	(0.0058)	(0.0121)	(0.0118)	(0.0057)	(0.0048)
Dryland	0.0012	-0.0005	0.0028	-0.0015	0.0001	-0.0002	-0.0038	-0.0126	0.0017	-0.0007
Privately Owned but	(0.0036)	(0.0025)	(0.0061)	(0.0040)	(0.0038)	(0.0029)	(0.0072)	(0.0116)	(0.0043)	(0.0033)
managed by others (both	0.0101	0.0068	0.0117	0.0120	0.0088	0.0020	0.0188	-0.0016	0.0099	0.0086
paddy and dryland)	(0.0148)	(0.0061)	(0.0222)	(0.0090)	(0.0159)	(0.0081)	(0.0328)	(0.0215)	(0.0172)	(0.0079)
Province										
NAD	0.0556*	-0.0389*	0.0585*	-0.0417*	0.0518*	-0.0342*	0.0200***	-0.0098	0.0707*	-0.0513*
	(0.0051)	(0.0042)	(0.0078)	(0.0066)	(0.0063)	(0.0049)	(0.0103)	(0.0078)	(0.0064)	(0.0055)
North Sumatera	0.0398*	-0.0054	0.0371*	0.0038	0.0414*	-0.0132**	0.0180***	-0.0072	0.0498*	-0.0026
	(0.0044)	(0.0033)	(0.0068)	(0.0052)	(0.0055)	(0.0039)	(0.0093)	(0.0070)	(0.0056)	(0.0044)
West Sumatera	0.0349*	-0.0290*	0.0235**	-0.0215**	0.0467*	-0.0341*	0.0118	-0.0052	0.0446*	-0.0380*
	(0.0049)	(0.0041)	(0.0073)	(0.0064)	(0.0064)	(0.0050)	(0.0097)	(0.0074)	(0.0063)	(0.0056)
Riau	0.0619*	-0.0532*	0.0621*	-0.0555*	0.0604*	-0.0486*	0.0300**	-0.0272**	0.0759*	-0.0658*
	(0.0061)	(0.0057)	(0.0091)	(0.0089)	(0.0080)	(0.0070)	(0.0117)	(0.0099)	(0.0077)	(0.0076)
Jambi	0.0377*	-0.0437*	0.0337*	-0.0425*	0.0412*	-0.0428*	0.0167	-0.0173***	0.0466*	-0.0551*
	(0.0055)	(0.0051)	(0.0083)	(0.0077)	(0.0072)	(0.0063)	(0.0116)	(0.0091)	(0.0068)	(0.0067)
South Sumatera	0.0389*	-0.0498*	0.0310*	-0.0489*	0.0467*	-0.0483*	0.0116	-0.0093	0.0508*	-0.0685*
	(0.0049)	(0.0046)	(0.0074)	(0.0069)	(0.0065)	(0.0057)	(0.0098)	(0.0078)	(0.0063)	(0.0062)
Bengkulu	0.0418*	-0.0543*	0.0359*	-0.0493*	0.0470*	-0.0590*	0.0355**	-0.0127	0.0485*	-0.0706*
	(0.0057)	(0.0053)	(0.0084)	(0.0078)	(0.0077)	(0.0074)	(0.0143)	(0.0099)	(0.0070)	(0.0069)

Table 4-9: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Lampung	0.0424*	-0.0339*	0.0455*	-0.0271*	0.0392*	-0.0411*	0.0163	-0.0037	0.0533*	-0.0464*
	(0.0054)	(0.0045)	(0.0084)	(0.0069)	(0.0067)	(0.0059)	(0.0107)	(0.0081)	(0.0068)	(0.0061)
Bangka-Belitung	0.0099***	-0.0117**	-0.0038	0.0035	0.0237**	-0.0252**	0.0013	-0.0045	0.0120	-0.0112
	(0.0059)	(0.0054)	(0.0089)	(0.0080)	(0.0077)	(0.0073)	(0.0105)	(0.0083)	(0.0078)	(0.0075)
Riau Islands	0.0314*	-0.0228**	0.0266**	-0.0168	0.0357**	-0.0266**	0.0048	0.0011	0.0603*	-0.0511*
	(0.0080)	(0.0073)	(0.0119)	(0.0112)	(0.0104)	(0.0091)	(0.0105)	(0.0079)	(0.0141)	(0.0139)
DKI Jakarta	0.0398*	-0.0348*	0.0531*	-0.0558*	0.0310*	-0.0251*	0.0196**	-0.0117	-	-
	(0.0070)	(0.0068)	(0.0120)	(0.0131)	(0.0081)	(0.0069)	(0.0095)	(0.0074)		
West Java	0.0084**	-0.0352*	0.0089	-0.0377*	0.0087***	-0.0316*	0.0030	-0.0105	0.0062	-0.0458*
	(0.0041)	(0.0039)	(0.0064)	(0.0062)	(0.0050)	(0.0045)	(0.0088)	(0.0071)	(0.0053)	(0.0055)
Central Java	0.0472*	-0.0395*	0.0419*	-0.0358*	0.0520*	-0.0415*	0.0270**	-0.0154**	0.0549*	-0.0481*
	(0.0043)	(0.0036)	(0.0065)	(0.0056)	(0.0055)	(0.0044)	(0.0091)	(0.0071)	(0.0055)	(0.0049)
DIY	0.0769*	-0.0540*	0.0891*	-0.0494*	0.0652*	-0.0590*	0.0402**	-0.0156	0.0947*	-0.0715*
	(0.0123)	(0.0085)	(0.0192)	(0.0125)	(0.0148)	(0.0119)	(0.0154)	(0.0104)	(0.0175)	(0.0123)
East Java	0.0421*	-0.0347*	0.0406*	-0.0280*	0.0428*	-0.0402*	0.0222**	-0.0101	0.0503*	-0.0447*
	(0.0042)	(0.0036)	(0.0065)	(0.0055)	(0.0053)	(0.0044)	(0.0091)	(0.0071)	(0.0054)	(0.0049)
Banten	0.0131**	-0.0361*	0.0107	-0.0422*	0.0152**	-0.0294*	0.0112	-0.0103	0.0102	-0.0458*
	(0.0052)	(0.0054)	(0.0080)	(0.0086)	(0.0065)	(0.0063)	(0.0100)	(0.0080)	(0.0068)	(0.0077)
Bali	0.0228*	-0.0063	0.0168***	-0.0072	0.0285*	-0.0074	0.0062	0.0039	0.0302*	-0.0088
	(0.0057)	(0.0045)	(0.0087)	(0.0074)	(0.0073)	(0.0052)	(0.0103)	(0.0075)	(0.0077)	(0.0064)
West Nusa Tenggara	0.0451*	-0.0251*	0.0370*	-0.0158**	0.0524*	-0.0329*	0.0210**	-0.0040	0.0562*	-0.0341*
	(0.0055)	(0.0045)	(0.0083)	(0.0070)	(0.0073)	(0.0056)	(0.0101)	(0.0078)	(0.0074)	(0.0063)
East Nusa Tenggara	0.0231*	-0.0256*	0.0129***	-0.0185**	0.0336*	-0.0308*	0.0107	-0.0054	0.0278*	-0.0330*
	(0.0043)	(0.0036)	(0.0066)	(0.0056)	(0.0056)	(0.0045)	(0.0107)	(0.0081)	(0.0053)	(0.0048)
West Kalimantan	0.0347*	-0.0349*	0.0279*	-0.0322*	0.0406*	-0.0356*	0.0173***	-0.0115	0.0413*	-0.0439*
	(0.0048)	(0.0041)	(0.0073)	(0.0063)	(0.0061)	(0.0049)	(0.0104)	(0.0080)	(0.0060)	(0.0054)
Central Kalimantan	0.0663*	-0.0510*	0.0715*	-0.0513*	0.0595*	-0.0490*	0.0290**	-0.0112	0.0824*	-0.0681*
	(0.0057)	(0.0047)	(0.0086)	(0.0072)	(0.0072)	(0.0060)	(0.0110)	(0.0081)	(0.0072)	(0.0064)
South Kalimantan	0.0169**	-0.0285*	0.0049	-0.0224**	0.0285*	-0.0323*	0.0087	-0.0037	0.0198**	-0.0378*
	(0.0049)	(0.0044)	(0.0075)	(0.0069)	(0.0063)	(0.0054)	(0.0102)	(0.0078)	(0.0062)	(0.0059)
East Kalimantan	0.0335*	-0.0355*	0.0336*	-0.0306*	0.0327*	-0.0399*	0.0090	-0.0041	0.0490*	-0.0578*
	(0.0054)	(0.0049)	(0.0084)	(0.0076)	(0.0066)	(0.0062)	(0.0095)	(0.0073)	(0.0077)	(0.0077)
North Sulawesi	0.0108***	-0.0336*	0.0075	-0.0295**	0.0140***	-0.0349*	-0.0172***	0.0012	0.0277**	-0.0567*
	(0.0060)	(0.0065)	(0.0092)	(0.0100)	(0.0076)	(0.0080)	(0.0101)	(0.0082)	(0.0084)	(0.0102)

Table 4-9: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Central Sulawesi	0.0312*	-0.0249*	0.0230**	-0.0184**	0.0387*	-0.0307*	0.0086	-0.0023	0.0390*	-0.0324*
	(0.0055)	(0.0046)	(0.0082)	(0.0070)	(0.0072)	(0.0058)	(0.0114)	(0.0086)	(0.0068)	(0.0060)
South Sulawesi	0.0134**	-0.0160*	0.0010	-0.0014	0.0256*	-0.0317*	-0.0026	0.0011	0.0192*	-0.0222*
	(0.0040)	(0.0034)	(0.0062)	(0.0052)	(0.0051)	(0.0044)	(0.0091)	(0.0071)	(0.0050)	(0.0045)
Southeast Sulawesi	0.0383*	-0.0184*	0.0368*	-0.0124**	0.0388*	-0.0227*	0.0328**	-0.0047	0.0430*	-0.0230*
	(0.0051)	(0.0040)	(0.0077)	(0.0062)	(0.0065)	(0.0049)	(0.0118)	(0.0080)	(0.0063)	(0.0053)
Gorontalo	-0.0092	-0.0148**	-0.0182**	-0.0053	0.0002	-0.0220**	0.0121	-0.0048	-0.0155**	-0.0177**
	(0.0059)	(0.0060)	(0.0091)	(0.0091)	(0.0073)	(0.0075)	(0.0125)	(0.0096)	(0.0073)	(0.0080)
Maluku	0.0618*	-0.0574*	0.0503*	-0.0484*	0.0744*	-0.0663*	0.0317**	-0.0166	0.0746*	-0.0750*
	(0.0070)	(0.0065)	(0.0101)	(0.0091)	(0.0097)	(0.0104)	(0.0137)	(0.0106)	(0.0087)	(0.0086)
North Maluku	0.0519*	-0.0708*	0.0456*	-0.0742*	0.0572*	-0.0652*	0.0517**	-0.0218**	0.0571*	-0.0906*
	(0.0068)	(0.0073)	(0.0099)	(0.0110)	(0.0091)	(0.0094)	(0.0157)	(0.0104)	(0.0083)	(0.0099)
ρ	-0.7623*		-0.7757*		-0.7429*		-0.8178*		-0.7485*	
	(0.0065)		(0.0080)		(0.0112)		(0.0123)		(0.0076)	
Wald Test Chi^2	7001.5*		4085.9*		3024.7*		1731.2*		5102.4*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	4150.38		2547.2*		1467.7*		958.8*		3183.2*	
Log-likelihood	-28339.698		-16664.105		-11503.599		-5912.876		-22230.071	
Number of Observations	102,817		53,660		49,157		35,077		67,740	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Table 4-10: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years by Region and Gender, SUSENAS 2005.

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Characteristics								
Biological Child	0.0201*	-0.0105**	0.0266*	-0.0286*	0.0046	-0.0061	0.0081	-0.0092**
	(0.0054)	(0.0038)	(0.0047)	(0.0031)	(0.0059)	(0.0058)	(0.0050)	(0.0044)
Household Head's Characteristics								
Age	0.0001	-0.0002	0.0003	-0.0002***	-0.0004**	0.0006*	0.0001	-0.0001
	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0001)
Female Headed	-0.0408	0.0351**	-0.0549**	0.0344**	-0.0300	-0.0098	0.0445	-0.0367
	(0.0285)	(0.0177)	(0.0177)	(0.0118)	(0.0344)	(0.0395)	(0.0345)	(0.0314)
Household Head's Education								
Completed Primary	0.0161**	-0.0054	0.0117**	-0.0042	0.0239*	-0.0232*	0.0123**	-0.0160*
	(0.0060)	(0.0043)	(0.0058)	(0.0044)	(0.0045)	(0.0043)	(0.0038)	(0.0036)
Junior Secondary	0.0410*	-0.0197*	0.0327*	-0.0101**	0.0592*	-0.0405*	0.0321*	-0.0204*
	(0.0069)	(0.0051)	(0.0067)	(0.0051)	(0.0060)	(0.0055)	(0.0051)	(0.0044)
Senior Secondary	0.0419*	-0.0166**	0.0287*	-0.0092***	0.0655*	-0.0439*	0.0411*	-0.0272*
	(0.0070)	(0.0052)	(0.0069)	(0.0050)	(0.0071)	(0.0062)	(0.0063)	(0.0050)
Tertiary Education	0.0384*	-0.0131**	0.0235**	-0.0101***	0.0810*	-0.0622*	0.0349**	-0.0203**
	(0.0089)	(0.0065)	(0.0082)	(0.0059)	(0.0141)	(0.0124)	(0.0109)	(0.0088)
Household Head's Employment								
Employer	-0.0042	0.0074**	0.0111**	-0.0034	-0.0088**	0.0262*	-0.0002	0.0108*
	(0.0038)	(0.0027)	(0.0043)	(0.0028)	(0.0033)	(0.0033)	(0.0029)	(0.0027)
Employee	0.0106**	-0.0069**	0.0063**	-0.0061**	-0.0049	0.0012	0.0011	0.0017
	(0.0037)	(0.0028)	(0.0032)	(0.0027)	(0.0055)	(0.0057)	(0.0048)	(0.0046)
Casual Worker	-0.0029	-0.0007	-0.0052	0.0007	-0.0080	0.0080	-0.0076***	0.0078***
	(0.0048)	(0.0038)	(0.0041)	(0.0036)	(0.0050)	(0.0055)	(0.0044)	(0.0043)
Unpaid Worker	-0.0127	-0.0165	0.0154	-0.0066	-0.0080	0.0619*	-0.0120	0.0321*
	(0.0155)	(0.0111)	(0.0156)	(0.0115)	(0.0127)	(0.0102)	(0.0101)	(0.0076)
Others	0.0104	-0.0026	0.0107***	-0.0063	-0.0009	0.0172**	-0.0069	0.0150
	(0.0064)	(0.0047)	(0.0061)	(0.0043)	(0.0079)	(0.0078)	(0.0065)	(0.0060)

Table 4-10: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics								
Spouse's Education								
Completed Primary	0.0147**	-0.0069***	0.0102**	-0.0017	0.0191*	-0.0158*	0.0208*	-0.0146*
	(0.0053)	(0.0037)	(0.0052)	(0.0040)	(0.0040)	(0.0039)	(0.0035)	(0.0033)
Junior Secondary	0.0318*	-0.0174*	0.0277*	-0.0037	0.0570*	-0.0277*	0.0510*	-0.0236*
	(0.0063)	(0.0045)	(0.0064)	(0.0046)	(0.0062)	(0.0054)	(0.0055)	(0.0045)
Senior Secondary	0.0410*	-0.0222*	0.0371*	-0.0139**	0.0730*	-0.0436*	0.0584*	-0.0295*
	(0.0069)	(0.0049)	(0.0070)	(0.0050)	(0.0087)	(0.0069)	(0.0076)	(0.0057)
Tertiary Education	0.0385*	-0.0274**	0.0284**	-0.0024	0.0848*	-0.0306**	0.0435**	-0.0235**
	(0.0097)	(0.0081)	(0.0086)	(0.0058)	(0.0203)	(0.0147)	(0.0131)	(0.0103)
Spouse's Employment								
Employer	-0.0156**	0.0284*	-0.0075	0.0264*	0.0050	0.0215*	-0.0001	0.0360*
	(0.0062)	(0.0042)	(0.0057)	(0.0036)	(0.0064)	(0.0059)	(0.0057)	(0.0043)
Employee	-0.0007	-0.0027	-0.0024	-0.0030	0.0053	-0.0107	-0.0075	0.0011
	(0.0058)	(0.0049)	(0.0051)	(0.0039)	(0.0085)	(0.0083)	(0.0076)	(0.0063)
Casual Worker	-0.0182**	0.0225*	-0.0078	0.0153**	-0.0165**	0.0301*	-0.0169**	0.0170**
	(0.0082)	(0.0057)	(0.0074)	(0.0048)	(0.0075)	(0.0074)	(0.0067)	(0.0058)
Unpaid Worker	-0.0012	0.0117**	-0.0021	0.0092**	0.0050	0.0210*	-0.0037	0.0147*
	(0.0064)	(0.0044)	(0.0066)	(0.0041)	(0.0052)	(0.0050)	(0.0047)	(0.0039)
Others	-0.0011	0.0028	0.0040	-0.0085**	0.0087***	-0.0231*	-0.0011	-0.0226*
	(0.0041)	(0.0032)	(0.0037)	(0.0028)	(0.0047)	(0.0047)	(0.0043)	(0.0038)
Income (Rp.)								
Household Income	0.0137**	-0.0123**	-0.0007	-0.0096***	-0.0126	0.0009	0.0014	0.0018
	(0.0052)	(0.0045)	(0.0052)	(0.0052)	(0.0108)	(00085)	(0.0123)	(0.0086)
Square of Household	0.0026	0.0028	0.0009	0.0069***	0.0070	0.0018	0.0016	-0.0023
Income	(0.0019)	(0.0024)	(0.0023)	(0.0037)	(0.0064)	(0.0033)	(0.0091)	(0.0048)
Household Characteristics								
Birth Order	-0.0378*	0.0216*	-0.0357*	-0.0202*	-0.0755*	0.0719*	-0.0553*	0.0404*
	(0.0042)	(0.0028)	(0.0039)	(0.0030)	(0.0039)	(0.0035)	(0.0035)	(0.0028)
Child Aged 0-5 years	0.0315*	-0.0177*	0.0268*	-0.0161*	0.0701*	-0.0611*	0.0527*	-0.0361*
	(0.0045)	(0.0030)	(0.0042)	(0.0032)	(0.0043)	(0.0039)	(0.0039)	(0.0031)
Child Aged 6-9 years	0.0320*	-0.0180*	0.0343*	-0.0193*	0.0697*	-0.0625*	0.0514*	-0.0366*
	(0.0045)	(0.0032)	(0.0043)	(0.0033)	(0.0043)	(0.0039)	(0.0038)	(0.0031)

Table 4-10: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Aged 10-14 years	0.0206*	-0.0091*	0.0171*	-0.0097*	0.0330*	-0.0314*	0.0255*	-0.0156*
	(0.0038)	(0.0025)	(0.0035)	(0.0025)	(0.0033)	(0.0031)	(0.0030)	(0.0024)
Child Aged 15-17 years	-0.0047**	0.0001	-0.0023	0.0003	-0.0023	-0.0063**	-0.0034***	-0.0019
	(0.0022)	(0.0016)	(0.0020)	(0.0016)	(0.0022)	(0.0022)	(0.0019)	(0.0017)
Number of Adults	0.0015	-0.0027**	-0.0008	-0.0011	0.0024***	-0.0068*	0.0009	-0.0007
	(0.0013)	(0.0010)	(0.0012)	(0.0009)	(0.0014)	(0.0014)	(0.0013)	(0.0011)
Land Ownerships								
Privately Owned: Paddy	0.0085	-0.0130	0.0109	-0.0124	-0.0074	-0.0094	0.0090	-0.0049
	(0.0226)	(0.0144)	(0.0110)	(0.0186)	(0.0074)	(0.0074)	(0.0108)	(0.0068)
Privately Owned: Dryland	0.0161	0.0141	-0.0092	-0.0130	0.0027	-0.0015	0.0013	-0.0007
	(0.0214)	(0.0186)	(0.0062)	(0.0145)	(0.0071)	(0.0052)	(0.0047)	(0.0037)
Privately Owned but managed by others (both paddy and dryland)	0.0206	0.0033	0.0108	-0.0115	0.0111	0.0155	0.0081	0.0024
	(0.0667)	(0.0101)	(0.0219)	(0.0549)	(0.0257)	(0.0116)	(0.0194)	(0.0105)
Province								
NAD	0.0254**	-0.0144	0.0041	-0.0042	0.0793*	-0.0560*	0.0619*	-0.0436*
	(0.0126)	(0.0111)	(0.0211)	(0.0116)	(0.0101)	(0.0090)	(0.0076)	(0.0063)
North Sumatera	0.0323**	-0.0064	-0.0140	-0.0058	0.0435*	0.0089	0.0539*	-0.0121**
	(0.0116)	(0.0100)	(0.0188)	(0.0106)	(0.0086)	(0.0070)	(0.0070)	(0.0050)
West Sumatera	0.0187	-0.0058	-0.0110	-0.009	0.0298**	-0.0283**	0.0588*	-0.0441*
	(0.0120)	(0.0106)	(0.0193)	(0.0110)	(0.0094)	(0.0088)	(0.0082)	(0.0067)
Riau	0.0461**	-0.1856*	-0.0032	-0.0120	0.0736*	-0.0659*	0.0755*	-0.0607*
	(0.0157)	(0.0143)	(0.0211)	(0.0126)	(0.0115)	(0.0117)	(0.0101)	(0.0093)
Jambi	0.0513**	-0.0343**	-0.0297	-0.0036	0.0339**	-0.0496*	0.0587*	-0.0557*
	(0.0174)	(0.0160)	(0.0203)	(0.0123)	(0.0102)	(0.0102)	(0.0090)	(0.0083)
South Sumatera	0.0181	-0.0127	-0.0100	-0.0035	0.0406*	-0.0672*	0.0594*	-0.0652*
	(0.0121)	(0.0112)	(0.0195)	(0.0115)	(0.0095)	(0.0095)	(0.0081)	(0.0076)
Bengkulu	0.0458**	-0.0122	0.0115	-0.0112	0.0387*	-0.0649*	0.0564*	-0.0738*
	90.0182)	(0.0135)	(0.0257)	(0.0156)	(0.0104)	(0.0104)	(0.0091)	(0.0093)
Lampung	0.0503**	-0.0074	-0.0270	0.0009	0.0492*	-0.0353*	0.0559*	-0.0556*
	(0.0152)	(0.0117)	(0.0197)	(0.0119)	(0.0104)	(0.0092)	(0.0085)	(0.0079)
Bangka-Belitung	0.0109	-0.0015	-0.0252	-0.0059	-0.0085	0.0068	0.0317**	-0.0262**
	(0.0135)	(0.0113)	(0.0201)	(0.0135)	(0.0117)	(0.0115)	(0.0103)	(0.0097)

Table 4-10: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
ﺔiau Islands	0.0191	0.0012	-0.0268	0.0034	0.0469**	-0.0543**	0.0736*	-0.0434**
	(0.0135)	(0.0113)	(0.0201)	(0.0118)	(0.0206)	(0.0209)	(0.0198)	(0.0173)
DKI Jakarta	0.0444*	-0.0250**	-0.0198	0.0010	-	-	-	-
	(0.0124)	(0.0112)	(0.0189)	(0.0108)				
West Java	0.0214**	-0.0159	-0.0319***	-0.0020	0.0023	-0.0486*	0.0106	-0.0402*
	(0.0109)	(0.0102)	(0.0185)	(0.0106)	(0.0084)	(0.0089)	(0.0064)	(0.0063)
Central Java	0.0443*	-0.0196***	-0.0080	-0.0074	0.0430*	-0.0408*	0.0664*	-0.0519*
	(0.0115)	(0.0103)	(0.0187)	(0.0106)	(0.0082)	(0.0077)	(0.0071)	(0.0060)
DIY	0.0830**	-0.0202	-0.0066	-0.0117	0.0954*	-0.0614*	0.0912*	-0.0812*
	(0.0248)	(0.0152)	(0.0226)	(0.0150)	(0.0256)	(0.0176)	(0.0234)	(0.0187)
East Java	0.0397*	-0.0122	-0.0123	-0.0045	0.0447*	-0.0348*	0.0541*	-0.0523*
	(0.0113)	(0.0102)	(0.0187)	(0.0107)	(0.0083)	(0.0076)	(0.0067)	(0.0059)
Banten	0.0338**	-0.0203***	-0.0274	0.0012	-0.0004	-0.0495*	0.0195**	-0.0387*
	(0.0133)	(0.0122)	(0.0192)	(0.0114)	(0.0103)	(00120)	(0.0086)	(0.0090)
Bali	0.0159	0.00002	-0.0200	0.0114	0.0243**	-0.0122	0.0356*	-0.0087
	(0.0130)	(0.0109)	(0.0199)	(0.0111)	(0.0118)	(0.0106)	(0.0095)	(0.0071)
West Nusa Tenggara	0.0311**	-0.0061	-0.0048	0.0013	0.0454*	-0.0212**	0.0650*	-0.0439*
	(0.0128)	(0.0111)	(0.0198)	(0.0115)	(0.0111)	(0.0098)	(0.0095)	(0.0076)
East Nusa Tenggara	0.0156	-0.0003	-0.0102	-0.0107	0.0138***	-0.0246**	0.0411*	-0.0376*
	(0.0134)	(0.0112)	(0.0206)	(0.0129)	(0.0081)	(0.0074)	(0.0067)	(0.0057)
West Kalimantan	0.0355**	-0.0223***	-0.0175	0.0011	0.0288**	-0.0383*	0.0517*	-0.0458*
	(0.0135)	(0.0121)	(0.0197)	(0.0115)	(0.0091)	(0.0084)	(0.0075)	(0.0063)
Central Kalimantan	0.0492**	-0.0109	-0.0082	-0.0122	0.0849*	-0.0708*	0.0769*	-0.0614*
	(0.0145)	(0.0112)	(0.0203)	(0.0126)	(0.0108)	(0.0099)	(0.0090)	(0.0077)
South Kalimantan	0.0099	-0.0039	-0.0015	-0.0026	0.0058	-0.0309**	0.0324*	-0.0408*
	(0.0125)	(0.0111)	(0.0206)	(0.0118)	(0.0095)	(0.0094)	(0.0077)	(0.0070)
East Kalimantan	0.0245**	-0.0081	-0.0239	0.0028	0.0461*	-0.0462*	0.0501*	-0.0707*
	(0.0121)	(0.0106)	(0.0191)	(0.0108)	(0.0120)	(0.0114)	(0.0093)	(0.0117)
North Sulawesi	0.0004	-0.0005	-0.0515**	0.0067	0.0174	-0.0538**	0.0365**	-0.0544*
	(0.0129)	(0.0117)	(0.0195)	(0.0120)	(0.0126)	(0.0156)	(0.0107)	(0.0127)
Central Sulawesi	0.0159	-0.0022	-0.0170	0.0019	0.0268**	-0.0239**	0.0498*	-0.0387*
	(0.0150)	(0.0127)	(0.0209)	(0.0122)	(0.0101)	(0.0094)	(0.0088)	(0.0074)

Table 4-10: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years by Region and Gender, SUSENAS 2005.

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
South Sulawesi	0.0020	0.0016	-0.0210	0.0018	0.0032	-0.0029	0.0338*	-0.0417*
	(0.0110)	(0.0101)	(0.0189)	(0.0109)	(0.0077)	(0.0070)	(0.0063)	(0.0057)
Southeast Sulawesi	0.0485**	-0.0082	0.0002	0.0005	0.0381*	-0.0142***	0.0455*	-0.0279*
	(0.0157)	(0.0117)	(0.0211)	(0.0116)	(0.0096)	(0.0083)	(0.0079)	(0.0063)
Gorontalo	0.0182	0.0016	-0.0103	-0.0152	-0.0288**	-0.0086	-0.0018	-0.0230**
	(0.0161)	(0.0126)	(0.0229)	(0.0180)	(0.0115)	(0.0125)	(0.0089)	(0.0096)
Maluku	0.0413**	-0.0178	0.0059	-0.0126	0.0584*	-0.0630*	0.0911*	-0.0869*
	(0.0185)	(0.0148)	(0.0234)	(0.0161)	(0.0126)	(0.0123)	(0.0120)	(0.0139)
North Maluku	0.0638**	-0.0233	0.0226	-0.0170	0.0468*	-0.0961*	0.0654*	-0.0790*
	(0.0205)	(0.0145)	(0.0264)	(0.0146)	(0.0123)	(0.0150)	(0.0110)	(0.0122)
ρ	-0.8245*		-0.8220*		-0.7674*		-0.7187	
	(0.0162)		(0.0185)		(0.0091)		(0.0135)	
Wald Test Chi^2	3037.2*		1138.6*		2907.3*		2189.1*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	531.2*		417.3*		2120.4*		1043.9*	
Log-likelihood	-3173.438		-2640.788		-13372.844		-87.33.540	
Number of Observations	18,048		17,029		35,612		32,128	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Table 4-11: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years, SUSENAS 2005.

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Child Characteristics										
Girls	0.0775*	-0.0870*	-	-	-	-	0.0389*	-0.0313*	0.1032*	-0.1242*
	(0.0035)	(0.0033)					(0.0049)	(0.0045)	(0.0047)	(0.0045)
Biological Child	0.1723*	-0.1702*	0.1093*	-0.1042	0.2025*	-0.1950*	0.2041*	-0.1931*	0.1058*	-0.1066*
	(0.0068)	(0.0064)	(0.0103)	(0.0099)	(0.0084)	(0.0075)	(0.0077)	(0.0072)	(0.0102)	(0.0097)
Household Head's Characteristics										
Age	0.0020*	0.0013*	0.0015*	0.0007**	0.0025*	-0.0017*	0.0018*	-0.0019*	0.0020*	-0.0007*
	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Female Headed	-0.1165**	-0.0022	-0.1076***	-0.0220	-0.1502**	0.0278	-0.1295**	0.0435	-0.0809	-0.0604
	(0.0501)	(0.0519)	(0.0644)	(-0.0069)	(0.0752)	(0.0667)	(0.0635)	(0.0569)	(0.0696)	(0.0760)
Household Head's Education										
Completed Primary	0.0541*	-0.0519*	0.0509*	-0.0565*	0.0590*	-0.0460*	0.0515*	-0.0440**	0.0566*	-0.0550*
	(0.0073)	(0.0069)	(0.0100)	(0.0096)	(0.0106)	(0.0096)	(0.0140)	(0.0129)	(0.0090)	(0.0086)
Junior Secondary	0.1659*	-0.1407*	0.1719*	-0.1533*	0.1562*	-0.1209*	0.1328*	-0.1092*	0.1819*	-0.1548*
	(0.0087)	(0.0082)	(0.0119)	(0.0115)	(0.0124)	(0.0114)	(0.0152)	(0.0141)	(0.0111)	(0.0106)
Senior Secondary	0.2219*	-0.1792*	0.2348*	-0.2035*	0.2033*	-0.1454*	0.1844*	-0.1504*	0.2374*	-0.1864*
	(0.0096)	(0.0091)	(0.0133)	(0.0128)	(0.0136)	(0.0124)	(0.0156)	(0.0145)	(0.0130)	(0.0123)
Tertiary Education	0.2072*	-0.1654*	0.3052*	-0.2850*	0.1568*	-0.1053*	0.1513*	-0.1261*	0.3071*	-0.2416*
	(0.0133)	(0.0124)	(0.0218)	(0.0212)	(0.0171)	(0.0155)	(0.0179)	(0.0164)	(0.0233)	(0.0226)
Household Head's Employment										
Employer	-0.0347*	0.0563*	-0.0442*	0.0749*	-0.0182**	0.0263*	-0.0099	0.0240**	-0.0432*	0.0704*
	(0.0048)	(0.0046)	(0.0067)	(0.0065)	(0.0067)	(0.0062)	(0.0076)	(0.0072)	(0.0063)	(0.0060)
Employee	0.0238*	-0.0249*	0.0172***	-0.0166***	0.0272**	-0.0288*	0.0351*	-0.0325*	0.0025	-0.0066
	(0.0063)	(0.0060)	(0.0091)	(0.0088)	(0.0085)	(0.0078)	(0.0072)	(0.0067)	(0.0100)	(0.0097)
Casual Worker	-0.0461*	0.0381*	-0.0695*	0.0588*	-0.0190***	0.0137	-0.0319**	0.0299**	-0.0530*	0.0434*
	(0.0073)	(0.0071)	(0.0102)	(0.0099)	(0.0102)	(0.0097)	(0.0101)	(0.0094)	(0.0099)	(0.0098)
Unpaid Worker	-0.0045	0.0105	-0.0399	0.0211	0.0356	-0.0010	0.0044	-0.0139	-0.0121	0.0217
	(0.0209)	(0.0197)	(0.0286)	(0.0287)	(0.0312)	(0.0258)	(0.0339)	(0.0318)	(0.0265)	(0.0257)
Others	-0.0453*	0.0343*	-0.0639*	0.0478*	-0.0249***	0.0215***	-0.0143	0.0101	-0.0717*	0.0589*
	(0.0093)	(0.0089)	(0.0129)	(0.0126)	(0.0132)	(0.0119)	(0.0114)	(0.0105)	(0.0137)	(0.0134)

Table 4-11: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics										
Spouse's Education										
Completed Primary	0.0628*	-0.0440*	0.0610*	-0.0415*	0.0634*	-0.0454*	0.0506*	-0.0247**	0.0719*	-0.0534*
	(0.0064)	(0.0060)	(0.0087)	(0.0084)	(0.0092)	(0.0084)	(0.0117)	(0.0111)	(0.0079)	(0.0076)
Junior Secondary	0.1663*	-0.1159*	0.1843*	-0.1291*	0.1416*	-0.0981*	0.1155*	-0.0742*	0.1973*	-0.1378*
	(0.0083)	(0.0079)	(0.0115)	(0.0111)	(0.0117)	(0.0108)	(0.0134)	(0.0127)	(0.0110)	(0.0105)
Senior Secondary	0.2111*	-0.1575*	0.2345*	-0.1955*	0.1794*	-0.1129*	0.1556*	-0.1093*	0.2633*	-0.1891*
	(0.0099)	(0.0095)	(0.0141)	(0.0138)	(0.0137)	(0.0125)	(0.0144)	(0.0136)	(0.0152)	(0.0143)
Tertiary Education	0.1924*	0.1299*	0.3235*	-0.2515*	0.1260*	-0.0741*	0.1506*	-0.0796*	0.0275*	-0.2496*
	(0.0151)	(0.0141)	(0.0267)	(0.0257)	(0.0186)	(0.0170)	(0.0179)	(0.0165)	(0.0289)	(0.0288)
Spouse's Employment										
Employer	-0.0215**	0.0769*	0.0028	0.0298*	-0.0490*	0.0920*	-0.0170	0.0766*	-0.0215***	0.0718*
	(0.0086)	(0.0081)	(0.0122)	(0.0117)	(0.0118)	(0.0104)	(0.0121)	(0.0112)	(0.0118)	(0.0112)
Employee	-0.0264**	0.0098	-0.0253***	0.0122	-0.0293**	0.0038	-0.0152	0.0111	-0.0502**	0.0263**
	(0.0098)	(0.0093)	(0.0142)	(0.0136)	(0.0131)	(0.0117)	(0.0108)	(0.0100)	(0.0157)	(0.0150)
Casual Worker	-0.0793*	0.0740*	-0.0853*	0.0755*	-0.0729*	0.0675*	-0.0405**	0.0447**	-0.0946*	0.0835*
	(0.0115)	(0.0110)	(0.0163)	(0.0158)	(0.0159)	(0.0143)	(0.0183)	(0.0174)	(0.0152)	(0.0146)
Unpaid Worker	-0.0353*	0.0633*	-0.0284**	0.0687*	-0.0461*	0.0579*	-0.0179	0.0391**	-0.0399*	0.0638*
	(0.0073)	(0.0069)	(0.0102)	(0.0097)	(0.0103)	(0.0093)	(0.0123)	(0.0114)	(0.0099)	(0.0093)
Others	-0.0186**	-0.0218*	-0.0202**	-0.0093	-0.0201**	-0.0359*	-0.0118	-0.0015	-0.0233**	-0.0364*
	(0.0063)	(0.0059)	(0.0088)	(0.0084)	(0.0088)	(0.0079)	(0.0079)	(0.0073)	(0.0090)	(0.0086)
Income (Rp.)										
Household Income	0.0520*	-0.0543*	0.0528**	-0.0464**	0.0441**	-0.0553*	0.0477*	-0.0492*	0.0349***	-0.0329**
	(0.0116)	(0.0102)	(0.0164)	(0.0152)	(0.0152)	(0.0124)	(0.0134)	(0.0119)	(0.0185)	(0.0173)
Square of HH Income	-0.0150**	0.0124**	0.0092	0.0077	-0.0166***	0.0119***	-0.0165**	0.0144**	0.0080	0.0013
	(0.0064)	(0.0052)	(0.0087)	(0.0078)	(0.0085)	(0.0063)	(0.0074)	(0.0065)	(0.0105)	(0.0093)
Household Characteristics										
Birth Order	-0.1462*	0.1354*	-0.1678*	0.1594*	-0.1209*	0.1067*	-0.0981*	0.0859*	-0.1750*	0.1659*
	(0.0075)	(0.0071)	(0.0105)	(0.0102)	(0.0105)	(0.0095)	(0.0104)	(0.0096)	(0.0101)	(0.0097)
Child Aged 0-5 years	0.1147*	-0.1031*	0.1343*	-0.1222*	0.0939*	-0.0827*	0.0631*	-0.0529*	0.1486*	-0.1372*
	(0.0080)	(0.0076)	(0.0113)	(0.0110)	(0.0112)	(0.0102)	(0.0111)	(0.0104)	(0.0108)	(0.0104)
Child Aged 6-9 years	0.1245*	-0.1135*	0.1467*	-0.1372*	0.0992*	-0.0853*	0.0707*	-0.0641*	0.1576*	-0.1451*
	(0.0081)	(0.0076)	(0.0113)	(0.0110)	(0.0112)	(0.0101)	(0.0112)	(0.0104)	(0.0109)	(0.0104)

Table 4-11: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Child Aged 10-14 years	0.1277*	-0.1153*	0.1458*	-0.1372*	0.1064*	-0.0884*	0.0841*	-0.0736*	0.1529*	-0.1410*
	(0.0078)	(0.0074)	(0.0110)	(0.0107)	(0.0110)	(0.0099)	(0.0110)	(0.0101)	(0.0106)	(0.0101)
Child Aged 15-17 years	0.0645*	-0.0588*	0.0690*	-0.0677*	0.0570*	-0.0451*	0.0413*	-0.0349*	0.0767*	-0.0718*
	(0.0056)	(0.0053	(0.0079)	(0.0077)	(0.0078)	(0.0070)	(0.0078)	(0.0072)	(0.0075)	(0.0073)
Number of Adults	0.0082*	-0.0133*	0.0122*	-0.0174*	0.0031	-0.0079*	0.0037	-0.0059**	0.0107*	-0.0179*
	(0.0018)	(0.0017)	(0.0025)	(0.0024)	(0.0024)	(0.0022)	(0.0024)	(0.0022)	(0.0024)	(0.0023)
Rural	-0.0507*	0.0405*	-0.0577*	0.0549*	-0.0435*	0.0248*	-	-	-	-
	(0.0043)	(0.0041)	(0.0062)	(0.0060)	(0.0059)	(0.0055)				
Land Ownerships										
Privately Owned: Paddy	0.0106	-0.0059	0.0137	-0.0086	0.0138	-0.0137	-0.0269	-0.0306	0.0244	-0.0065
	(0.0177)	(0.0136)	(0.0235)	(0.0178)	(0.0277)	(0.0189)	(0.0315)	(0.0285)	(0.0226)	(0.0172)
Privately Owned: Dryland	0.0046	0.0034	0.0128	0.0043	-0.0048	0.0022	-0.0039	0.0249	0.0049	0.00002
	(0.0085)	(0.0075)	(0.0124)	(0.0102)	(0.0115)	(0.0107)	(0.0324)	(0.0164)	(0.0098)	(0.0090)
Privately Owned but managed by others (both paddy and dryland)	0.1087**	-0.0322	0.0875	0.0088	0.1165***	-0.0590	0.0902	0.0005	0.1137**	-0.0450
	(0.0436)	(0.0275)	(0.0629)	(0.0445)	(0.0604)	(0.0403)	(0.0809)	(0.0420)	(0.0542)	(0.0374)
Province										
NAD	0.1193*	-0.0760*	0.1003*	-0.0317	0.1400*	-0.1214*	-0.0196	0.0019	0.1648*	-0.0996*
	(0.0158)	(0.0148)	(0.0224)	(0.0215)	(0.0216)	(0.0195)	(0.0351)	(0.0316)	(0.0196)	(0.0186)
North Sumatera	0.0323**	0.0301**	0.0168	0.0641**	0.0496**	-0.0059	-0.0700**	0.0710**	0.0671*	0.0260
	(0.0144)	(0.0134)	(0.0205)	(0.0196)	(0.0193)	(0.0170)	(0.0328)	(0.0291)	(0.0180)	(0.0169)
West Sumatera	0.0217	-0.0404**	-0.0134	0.0110	0.0597**	-0.0919*	-0.0696**	0.0361	0.0481**	-0.0634*
	(0.0158)	(0.0150)	(0.0225)	(0.0219)	(0.0215)	(0.0194)	(0.0342)	(0.0306)	(0.0199)	(0.0192)
Riau	0.0459**	-0.0386**	0.0539**	-0.0152	0.0375	-0.0669**	-0.0582	0.0305	0.0790*	-0.0589*
	(0.0170)	(0.0162)	(0.0239)	(0.0231)	(0.0232)	(0.0213)	(0.0362)	(0.0327)	(0.0212)	(0.0204)
Jambi	0.0068	-0.0207	-0.0013	-0.0033	0.0134	-0.0361***	-0.1137**	0.0707**	0.0380***	-0.0468*
	(0.0171)	(00162)	(0.0244)	(0.0235)	(0.0229)	(0.0207)	(0.0379)	(0.0343)	(0.0209)	(0.0201)
South Sumatera	-0.0069	-0.0307**	-0.0352	0.0110	0.0306	-0.0797*	-0.0727**	0.0377	0.0073	-0.0521*
	(0.0156)	(0.0148)	(0.0221)	(0.0214)	(0.0215)	(0.0196)	(0.0343)	(0.0308)	(0.0196)	(0.0188)
Bengkulu	0.0243	-0.0537**	-0.0095	-0.0063	0.0673**	-0.1102*	-0.0572	0.0455	0.0465**	-0.0832*
	(0.0171)	(0.0165)	(0.0242)	(0.0238)	(0.0236)	(0.0219)	(0.0405)	(0.0367)	(0.0207)	(0.0202)

Table 4-11: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Lampung	0.0086	-0.0044	-0.0026	0.0372	0.0260	-0.0575**	-0.0653***	0.0554***	0.0282	-0.0212
	(0.0167)	(0.0157)	(0.0237)	(0.0227)	(0.0226)	(0.0208)	(0.0363)	(0.0323)	(0.0208)	(0.0198)
Bangka-Belitung	-0.0771*	0.0842*	-0.1238*	0.1518*	-0.0150	-0.0019	-0.1185**	0.1027**	-0.0762**	0.0945*
	(0.0188)	(0.0176)	(0.0264)	(0.0255)	(0.0261)	(0.0234)	(0.0364)	(0.0326)	(0.0247)	(0.0234)
Riau Islands	0.0263	0.0204	0.0277	0.0524***	0.0279	-0.0190	-0.0508	0.0656**	0.0489	0.0145
	(0.0232)	(0.0215)	(0.0328)	(0.0310)	(0.0317)	(0.0286)	(0.0373)	(0.0332)	(0.0360)	(0.0340)
DKI Jakarta	-0.0452**	0.0772*	0.0451	0.0081	-0.0836*	0.0840*	-0.0980**	0.10248	-	-
	(0.0188)	(0.0174)	(0.0294)	(0.0279)	(0.0230)	(0.0202)	(0.0332)	(0.0294)		
West Java	-0.1161*	0.0431**	-0.1133*	0.0523**	-0.1172*	0.0333***	-0.1477*	0.0910**	-0.1398*	0.0365**
	(0.0143)	(0.0137)	(0.0205)	(0.0201)	(0.0191)	(0.0173)	(0.0324)	(0.0288)	(0.0187)	(0.0181)
Central Java	-0.0072	0.0078	0.0158	-0.0027	-0.0313***	0.0165	-0.0802**	0.0723**	0.0088	-0.0118
	(0.0142)	(0.0134)	(0.0203)	(0.0197)	(0.0190)	(0.0170)	(0.0327)	(0.0289)	(0.0179)	(0.0172)
DIY	0.1298*	-0.0647**	0.1533*	-0.0570	0.1015**	-0.0709**	-0.0051	0.0483	0.2058*	-0.1369*
	(0.0286)	(0.0249)	(0.0405)	(0.0357)	(0.0387)	(0.0322)	(0.0422)	(0.0364)	(0.0415)	(0.0361)
East Java	0.0076	-0.0035	0.0121	0.0228	0.0039	-0.0335***	-0.0644**	0.0573**	0.0209	-0.0177
	(0.0143)	(0.0134)	(0.0202)	0.0195)	(0.0191)	(0.0171)	(0.0327)	(0.0290)	(0.0179)	(0.0171)
Banten	-0.0842*	-0.0001	-0.0716**	-0.0150	-0.0905*	0.0068	-0.1067**	0.0586***	-0.1126*	-0.0110
	(0.0171)	(0.0171)	(0.0245)	(0.0253)	(0.0227)	(0.0208)	(0.0346)	(0.0313)	(0.0232)	(0.0231)
Bali	-0.0265	0.0582**	0.0089	0.0609**	-0.0579**	0.0471**	-0.0737**	0.0821**	-0.0287	0.0711**
	(0.0185)	(0.0174)	(0.0268)	(0.0264)	(0.0240)	(0.0212)	(0.0364)	(0.0328)	(0.0245)	(0.0232)
West Nusa Tenggara	0.0522**	-0.0230	0.0483**	0.0054	0.0535**	-0.0500**	-0.0612***	0.0602***	0.0967*	-0.0540**
	(0.0173)	(0.0163)	(0.0244)	(0.0233)	(0.0235)	(0.0214)	(0.0354)	(0.0318)	(0.0224)	(0.0212)
East Nusa Tenggara	-0.0428**	0.0398**	-0.0610**	0.0713**	-0.0244	0.0088	-0.0240	0.0079	-0.0563**	0.0547**
	(0.0153)	(0.0144)	(0.0217)	(0.0210)	(0.0206)	(0.0185)	(0.0367)	(0.0327)	(0.0187)	(0.0178)
West Kalimantan	-0.0117	0.0350**	-0.0236	0.0624**	0.0041	0.0015	-0.0565	0.0620***	-0.0077	0.0367**
	(0.0159)	(0.0148)	(0.0228)	(0.0218)	(0.0213)	(0.0187)	(0.0357)	(0.0316)	(0.0198)	(0.0186)
Central Kalimantan	0.0224	0.0011	0.0333	0.0207	0.0123	-0.0227	-0.0335	0.0340	0.0358***	-0.0058
	(0.0163)	(0.0152)	(0.0233)	(0.0222)	(0.0215)	(0.0196)	(0.0373)	(0.0333)	(0.0200)	(0.0189)
South Kalimantan	-0.0784*	0.0336**	-0.1033*	0.0720**	-0.0466**	-0.0104	-0.1108**	0.0886**	-0.0805*	0.0224
	(0.0165)	(0.0157)	(0.0232)	(0.0226)	(0.0227)	(0.0207)	(0.0359)	(0.0321)	(0.0206)	(0.0198)
East Kalimantan	0.0311***	-0.0120	0.0214	0.0316	0.0440***	-0.0607**	-0.0623***	0.0460	0.0740**	-0.0335
	(0.0173)	(0.0163)	(0.0245)	(0.0235)	(0.0235)	(0.0216)	(0.0343)	(0.0307)	(0.0234)	(0.0221)
North Sulawesi	-0.0429**	0.0307***	-0.0724**	0.0819**	-0.0115	-0.0227	-0.1428*	0.1129**	-0.0114	0.0037
	(0.0192)	(0.0184)	(0.0270)	(0.0261)	(0.0266)	(0.0248)	(0.0363)	(0.0331)	(0.0254)	(0.0243)

Table 4-11: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years, SUSENAS 2005 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Central Sulawesi	-0.0507**	0.0603*	-0.0986*	0.1394*	0.0190	-0.0553**	-0.0588	0.0607***	-0.0537**	0.0669**
	(0.0171)	(0.0159)	(0.0237)	(0.0225)	(0.0249)	(0.0229)	(0.0393)	(0.0351)	(0.0210)	(0.0196)
South Sulawesi	-0.0420**	0.0249***	-0.0832*	0.0893*	0.0097	-0.0546**	-0.1127**	0.0598**	-0.0276	0.0217
	(0.0144)	(0.0135)	(0.0204)	(0.0196)	(0.0196)	(0.0177)	(0.0333)	(0.0297)	(0.0177)	(0.0168)
Southeast Sulawesi	0.0198	0.0047	-0.0115	0.0687**	0.0536**	-0.0637**	0.0116	0.0077	0.0099	0.0127
	(0.0162)	(0.0151)	(0.0231)	(0.0222)	(0.0218)	(0.0197)	(0.0370)	(0.0322)	(0.0201)	(0.0190)
Gorontalo	-0.1168*	0.0604**	-0.1372*	0.1247*	-0.0907**	-0.0124	-0.1367**	0.0876**	-0.1229*	0.0594**
	(0.0207)	(0.0202)	(0.0300)	(0.0294)	(0.0273)	(0.0272)	(0.0400)	(0.0373)	(0.0266)	(0.0259)
Maluku	0.0591**	-0.0796*	0.0729**	-0.0658**	0.0425	-0.0881*	0.0125	-0.0390	0.0686**	-0.0894*
	(0.0201)	(0.0193)	(0.0290)	(0.0287)	(0.0264)	(0.0246)	(0.0453)	(0.0403)	(0.0246)	(0.0239)
North Maluku	0.0614**	-0.0791*	0.0780**	-0.0912**	0.0431***	-0.0653**	0.0630	-0.0356	0.0570**	-0.0904*
	(0.0197)	(0.0193)	(0.0284)	(0.0279)	(0.0257)	(0.0242)	(0.0425)	(0.0390)	(0.0245)	(0.0240)
ρ	-0.8864*		-0.8843*		-0.8874*		-0.9186*		-0.8715*	
	(0.0029)		(0.0038)		(0.0047)		(0.0043)		(0.0038)	
Wald Test Chi^2	10261.2*		5988.4*		4184.4*		3330.7*		6342.8*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	10832.0*		6485.7*		4148.8*		3308.0*		7366.5*	
Log-likelihood	-41026.660		-24242.220		-16299.462		-11541.405		-29084.384	
Number of Observations	52,843		28,979		23,864		19,739		33,104	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Table 4-12: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years by Region and Gender, SUSENAS 2005.

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Characteristics								
Biological Child	0.1244*	-0.1177*	0.2341*	-0.2195*	0.0835*	-0.0749*	0.1245*	-0.1297*
	(0.0124)	(0.0115)	(0.0094)	(0.0086)	(0.0147)	(0.0142)	(0.0136)	(0.0120)
Household Head's Characteristics								
Age	0.0017**	-0.0018*	0.0016**	-0.0018*	0.0013**	-0.00005	0.0028*	-0.0014*
	(0.0005)	(0.0005)	(0.0005)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Female Headed	-0.1345***	0.0413	-0.1477	0.0540	-0.0636	-0.0941	-0.1280	-0.0105
	(0.0747)	(0.0692)	(0.0959)	(0.0774)	(0.0915)	(0.1059)	(0.1087)	(0.1038)
Household Head's Education								
Completed Primary	0.0285	-0.0288***	0.0768*	-0.0561**	0.0590*	-0.0671*	0.0547*	0.0408**
	(0.0187)	(0.0171)	(0.0200)	(0.0184)	(0.0124)	(0.0121)	(0.0130)	(0.0118)
Junior Secondary	0.1152*	-0.0948*	0.1490*	-0.1168*	0.1972*	-0.1813*	0.1624*	-01211*
	(0.0205)	(0.0188)	(0.0217)	(0.0200)	(0.0153)	(0.0150)	(0.0159)	(0.0146)
Senior Secondary	0.1732*	-0.1430*	0.1934*	-0.1499*	0.2547*	-0.2254*	0.2154*	-0.1385*
	(0.0213)	(0.0197)	(0.0220)	(0.0203)	(0.0179)	(0.0174)	(0.0189)	(0.0167)
Tertiary Education	0.2054*	-0.2102*	0.1443*	-0.1008*	0.3691*	-0.3087*	0.2407*	-0.1754*
	(0.0274)	(0.0264)	(0.0243)	(0.0221)	(0.0343)	(0.0332)	(0.0303)	(0.0294)
Household Head's Employment								
Employer	-0.0237**	0.0425*	0.0066	0.0004	-0.0550*	0.0930*	-0.0253**	0.0362*
	(0.0109)	(0.0101)	(0.0102)	(0.0099)	(0.0087)	(0.0085)	(0.0089)	(0.0081)
Employee	0.0364*	-0.0347*	0.0322**	-0.0297**	-0.0057	0.0091	0.0113	-0.0209***
	(0.0105)	(0.0096)	(0.0096)	(0.0091)	(0.0140)	(0.0139)	(0.0140)	(0.0127)
Casual Worker	-0.0397**	0.0350**	-0.0238***	0.0245***	-0.0848*	0.0746*	-0.0144	0.0046
	(0.0139)	(0.0126)	(0.0142)	(0.0135)	(0.0138)	(0.0139)	(0.0140)	(0.0132)
Unpaid Worker	-0.0342	0.0463	0.0493	-0.0919**	-0.0467	0.0123	0.0307	0.0240
	(0.0475)	(0.0420)	(0.0496)	(0.0460)	(0.0360)	(0.0373)	(0.0405)	(0.0333)
Others	-0.0294***	0.0227	-0.0012	-0.0006	-0.0896*	0.0715*	-0.0493**	0.0456**
	(0.0159)	(0.0150)	(0.0161)	(0.0139)	(0.0188)	(0.0186)	(0.0199)	(0.0186)

Table 4-12: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics								
Spouse's Education								
Completed Primary	0.0580*	-0.0280***	0.0429**	-0.0252	0.0671*	-0.0493*	0.0751*	-0.0545*
	(0.0158)	(0.0147)	(0.0169)	(0.0158)	(0.0109)	(0.0107)	(0.0113)	(0.0103)
Junior Secondary	0.1431*	-0.0901*	0.0810*	-0.0568**	0.2110*	-0.1518*	0.1774*	-0.1164*
	(0.0185)	(0.0172)	(0.0192)	(0.0178)	(0.0152)	(0.0149)	(0.0157)	(0.0142)
Senior Secondary	0.1866*	-0.1408*	0.1170*	-0.0754*	0.2746*	-0.2293*	0.2459*	-0.1353*
	(0.0200)	(0.0188)	(0.0203)	(0.0187)	(0.0208)	(0.0204)	(0.0220)	(0.0186)
Tertiary Education	0.2914*	-0.1782*	0.0835*	-0.0340	0.3183*	-0.2922*	0.2294*	-0.2006*
	(0.0317)	(0.0277)	(0.0236)	(0.0217)	(0.0424)	(0.0437)	(0.0373)	(0.0353)
Spouse's Employment								
Employer	0.0144	0.0525**	-0.0463**	0.0957*	-0.0038	0.0598*	-0.0435**	0.0821*
	(0.0177)	(0.0166)	(0.0162)	(0.0144)	(0.0165)	(0.0160)	(0.0165)	(0.0144)
Employee	-0.0148	0.0229	-0.0192	-0.0015	-0.0363***	0.0030	-0.0640**	0.0456**
	(0.0162)	(0.0148)	(0.0144)	(0.0131)	(0.0219)	(0.0214)	(0.0219)	(0.0194)
Casual Worker	-0.0293	0.0381	-0.0584**	0.0508**	-0.1088*	0.0868*	-0.0776*	0.0718*
	(0.0254)	(0.0236)	(0.0259)	(0.0241)	(0.0215)	(0.0211)	(0.0210)	(0.0187)
Unpaid Worker	0.0018	0.0446**	-0.0445**	0.0404**	-0.0411**	0.0736*	-0.0410**	0.0522*
	(0.0177)	(0.0164)	(0.0163)	(0.0154)	(0.0135)	(0.0132)	(0.0141)	(0.0125)
Others	-0.0086	0.0097	-0.0212***	-0.0105	-0.0277**	-0.0242**	-0.0194	-0.0540*
	(0.0111)	(0.0103)	(0.0110)	(0.0100)	(0.0124)	(0.0121)	(0.0129)	(0.0116)
Income (Rp.)								
Household Income	0.0483**	-0.0480**	0.0422**	-0.0463*	-0.0398	0.0171	-0.0256	-0.0448***
	(0.0197)	(0.0189)	(0.0159)	(0.0132)	(0.0258)	(0.0243)	(0.0265)	(0.0238)
Square of Household	0.0120	-0.0121	-0.0163**	0.0114***	0.0051	0.0064	0.0095	-0.0054
Income	(0.0106)	(0.0108)	(0.0082)	(0.0063)	(0.0144)	(0.0126)	(0.0159)	(0.0139)
Household Characteristics								
Birth Order	-0.1134*	0.1037*	-0.0826*	0.0701*	-0.1950*	0.1902*	-0.1476*	0.1316*
	(0.0148)	(0.0138)	(0.0146)	(0.0134)	(0.0139)	(0.0138)	(0.0144)	(0.0130)
Child Aged 0-5 years	0.0733*	-0.0646*	0.0546*	-0.0458**	0.1672*	-0.1566*	0.1242*	-0.1107*
	(0.0159)	(0.0149)	(0.0156)	(0.0143)	(0.0149)	(0.0148)	(0.0154)	(0.0140)
Child Aged 6-9 years	0.0792*	-0.0791*	0.0644*	-0.0531*	0.1805*	-0.1692*	0.1270*	-0.1113*
	(0.0160)	(0.0149)	(0.0156)	(0.0142)	(0.0150)	(0.0148)	(0.0154)	(0.0139)

Table 4-12: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Aged 10-14 years	0.0926*	-0.0858*	0.0740*	-0.0612*	0.1717*	-0.1655*	0.1285*	-0.1077*
	(0.0157)	(0.0145)	(0.0154)	(0.0141)	(0.0146)	(0.0145)	(0.0151)	(0.0135)
Child Aged 15-17 years	0.0388**	-0.0355**	0.0410*	-0.0318**	0.0836*	-0.0853*	0.0658*	-0.0515*
	(0.0113)	(0.0104)	(0.0109)	(0.0099)	(0.0104)	(0.0104)	(0.0107)	(0.0096)
Number of Adults	0.0057***	-0.0098**	0.0023	-0.0024	0.0152*	-0.0214*	0.0043	-0.0127*
	(0.0034)	(0.0032)	(0.0032)	(0.0029)	(0.0034)	(0.0033)	(0.0034)	(0.0032)
Land Ownerships								
Privately Owned: Paddy	0.0446	-0.0960	-0.0434	-0.0182	0.0115	-0.0037	0.0652	-0.0147
Privately Owned:	(0.0591)	(0.0748)	(0.0321)	(0.0228)	(0.0273)	(0.0210)	(0.0449)	(0.0284)
Dryland	-0.0226	0.0365	0.0186	0.0169	0.0131	0.0025	-0.0056	-0.0036
Privately Owned but	(0.0570)	(0.0255)	(0.0348)	(0.0217)	(0.0136)	(0.0122)	(0.0139)	(0.0129)
managed by others (both	0.1822	0.0864	0.0789	-0.1984	0.0834	-0.0228	0.1172	-0.0453
paddy and dryland)	(0.1373)	(0.0617)	(0.1028)	(0.1561)	(0.0796)	(0.0618)	(0.0722)	(0.0464)
Province								
NAD	0.0073	0.0432	-0.0568	0.0860	0.1351*	-0.0332	0.1971*	-0.1655*
	(0.0437)	(0.0405)	(0.0590)	(0.0589)	(0.0277)	(0.0267)	(0.0267)	(0.0242)
North Sumatera	-0.0540	0.0339	-0.0920***	0.1478**	0.0053**	0.0686**	0.0829**	-0.0204
	(0.0407)	(0.0371)	(0.0557)	(0.0557)	(0.0254)	(0.0244)	(0.0243)	(0.0214)
West Sumatera	-0.0579	0.0152	-0.0979***	0.1055***	0.0043	-0.0007	0.0998*	-0.1259*
	(0.0430)	(0.0398)	(0.0572)	(0.0574)	(0.0281)	(0.0274)	(0.0275)	(0.0250)
Riau	0.0158	-0.0751***	-0.1408**	0.1798**	0.0655**	0.0060	0.0931**	-0.1329*
	(0.0460)	(0.0426)	(0.0594)	(0.0592)	(0.0297)	(0.0291)	(0.0293)	(0.0273)
Jambi	-0.0426	-0.0144	-0.2046**	0.2146*	0.0091	-0.0022	0.0745**	-0.0912*
	(0.0507)	(0.0457)	(0.0597)	(0.0599)	(0.0296)	(0.0289)	(0.0285)	(0.0257)
South Sumatera	-0.0500	0.0008	-0.1025***	0.1059***	-0.0319	0.0052	0.0590**	-01114*
	(0.0431)	(0.0394)	(0.0575)	(0.0582)	(0.0274)	(0.0266)	(0.0274)	(0.0249)
Bengkulu	-0.0274	0.0012	-0.0949	0.1273**	-0.0057	-0.0094	0.1114*	-0.1646*
	(0.0517)	(0.0500)	(0.0657)	(0.0626)	(0.0292)	(0.0288)	(0.0287)	(0.0269)
Lampung	-0.0344	-0.0091	-0.1022***	0.1547**	0.0056	0.0514***	0.0575**	-0.1078*
	(0.0467)	(0.0430)	(0.0590)	(0.0585)	(0.0291)	(0.0281)	(0.0286)	(0.0266)
Bangka-Belitung	-0.0793***	0.0612	-0.1618**	0.1751**	-0.1606*	0.1998*	0.0333	-0.0317
	(0.0464)	(0.0425)	(0.0595)	(0.0595)	(0.0348)	(0.0337)	(0.0351)	(0.0314)

Table 4-12: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Riau Islands	0.0110	0.0058	-0.1249**	0.1657**	0.0139	0.0783***	0.1014***	-0.0551
	(0.0486)	(0.0438)	(0.0601)	(0.0600)	(0.0489)	(0.0468)	(0.0536)	(0.0477)
DKI Jakarta	0.0135	-0.0244	-0.1887**	0.2422*	-	-	-	-
	(0.0425)	(0.0386)	(0.0552)	(0.0553)				
West Java	-0.0925**	0.0117	-0.2132*	0.2160*	-0.1476*	0.0697**	-0.1276*	0.0041
	(0.0402)	(0.0369)	(0.0547)	(0.0553)	(0.0264)	(0.0259)	(0.0253)	(0.0233)
Central Java	0.0018	-0.0226	-0.1726**	0.2107*	0.0131	-0.0002	0.0045	-0.0206
	(0.0406)	(0.0372)	(0.0550)	(0.0553)	(0.0253)	(0.0246)	(0.0242)	(0.0218)
DIY	0.0551	-0.0182	-0.0778	0.1579**	0.2171*	-0.1162**	0.1828**	-0.1462**
	(0.0576)	(0.0478)	(0.0639)	(0.0632)	(0.0558)	(0.0512)	(0.0620)	(0.0476)
East Java	-0.0021	-0.0128	-0.1394**	0.1699**	0.0074	0.0367	0.0382	-0.0754**
	(0.0406)	(0.0371)	(0.0552)	(0.0555)	(0.0252)	(0.0244)	(0.0244)	(0.0221)
Banten	-0.0401	-0.0382	-0.1773**	0.1905**	-0.1099**	-0.0059	-0.1062**	-0.0180
	(0.0439)	(0.0419)	(0.0572)	(0.0569)	(0.0328)	(0.0335)	(0.0312)	(0.0287)
Bali	-0.0181	0.0172	-0.1373**	0.1861**	0.0153	0.0762**	-0.0648**	0.0484***
	(0.0468)	(0.0437)	(0.0591)	(0.0588)	(0.0348)	(0.0346)	(0.0321)	(0.0279)
West Nusa Tenggara	-0.0235	-0.0057	-0.1131***	0.1773**	0.0884**	0.0004	0.1049**	-0.1099*
	(0.0445)	(0.0411)	(0.0587)	(0.0585)	(0.0314)	(0.0301)	(0.0306)	(0.0281)
East Nusa Tenggara	-0.0220	-0.0039	-0.0450	0.0634	-0.0757**	0.0938*	-0.0301	0.0113
	(0.0462)	(0.0422)	(0.0605)	(0.0604)	(0.0264)	(0.0255)	(0.0253)	(0.0228)
West Kalimantan	-0.0221	-0.0100	-0.1042***	0.1738**	-0.00267	0.0868**	0.0181	-0.0209
	(0.0458)	(0.0418)	(0.0583)	(0.0576)	(0.0281)	(0.0269)	(0.0268)	(0.0235)
Central Kalimantan	0.0345	-0.0640	-0.1123***	0.1694**	0.0343	0.0420	0.03892	-0.0585**
	(0.0497)	(0.0453)	(0.0594)	(0.0590)	(0.0283)	(0.0271)	(0.0269)	(0.0244)
South Kalimantan	-0.0801***	0.00422	-0.1529**	0.1799**	-0.1167*	0.0824**	-0.0321	-0.0426
	(0.0457)	(0.0419)	(0.0590)	(0.0588)	(0.0286)	(0.0279)	(0.0290)	(0.0263)
East Kalimantan	-0.0296	-0.0049	-0.1028***	0.1382**	0.0557***	0.0377	0.0964**	-0.1095*
	(0.0428)	(0.0395)	(0.0574)	(0.0575)	(0.0329)	(0.0315)	(0.0322)	(0.0301)
North Sulawesi	-0.1051**	0.0611	-0.1958**	0.2098*	-0.0609***	0.0841**	0.0516	-0.0859**
	(0.0462)	(0.0428)	(0.0592)	(0.0598)	(0.0352)	(0.0342)	(0.0366)	(0.0341)
Central Sulawesi	-0.0452	0.0445	-0.0988	0.1348**	-0.1166*	0.1746*	0.0447	-0.0895**
	(0.0511)	(0.0460)	(0.0629)	(0.0633)	(0.0288)	(0.0275)	(0.0312)	(0.0287)
South Sulawesi	-0.1013**	0.0162	-0.1303**	0.1417**	-0.0809**	0.1150*	0.0423***	-0.0914*
	(0.0415)	(0.0381)	(0.0562)	(0.0563)	(0.0249)	(0.0240)	(0.0245)	(0.0223)

Table 4-12: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years by Region and Gender, SUSENAS 2005 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Southeast Sulawesi	0.0190	-0.0248	-0.0162	0.0926	-0.0244	0.1032*	0.0532**	-0.0807**
	(0.0468)	(0.0426)	(0.0609)	(0.0588)	(0.0285)	(0.0276)	(0.0271)	(0.0248)
Gorontalo	-0.0916***	0.00368	-0.1982**	0.1917**	-0.1580*	0.1564*	-0.0753**	-0.0529
	(0.0533)	(0.0510)	(0.0619)	(0.0632)	(0.0381)	(0.0375)	(0.0357)	(0.0353)
Maluku	0.0321	-0.0561	-0.0286	0.0268	0.0863**	-0.0725**	0.0547***	-0.1055*
	(0.0592)	(0.0532)	(0.0714)	(0.0700)	(0.0352)	(0.0353)	(0.0325)	(0.0298)
North Maluku	0.2586*	-0.2603**	-0.0768	0.1514**	0.0492	-0.0632***	0.0678**	-0.1110*
	(0.0740)	(0.0749)	(0.0622)	(0.0611)	(0.0348)	(0.0342)	(0.0327)	(0.0311)
ρ	-0.9134*		-0.9213*		-0.8748*		-0.8691*	
	(0.0061)		(0.0064)		(0.0047)		(0.0064)	
Wald Test Chi^2	1919.3*		1652.6*		3448.9*		2621.6*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	1776.5*		1428.6*		4664.3*		2616.6*	
Log-likelihood	-6279.111		-4981.340		-17809.384		-11064.084	
Number of Observations	10,236		9,503		18,743		14,361	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Table 4-13: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2007.

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Age Groups										
10 to 12 years	0.0929*	-0.0859*	0.1103*	-0.1045*	0.0719*	-0.0615*	0.0608*	-0.0541*	0.1081*	-0.1008*
	(0.0023)	(0.0022)	(0.0034)	(0.0032)	(0.0031)	(0.0029)	(0.0036)	(0.0034)	(0.0030)	(0.0029)
15 to 17 years	-0.1123*	0.1013*	-0.1305*	0.1162*	-0.0882*	0.0790*	-0.0770*	0.0652*	-0.1300*	0.1177*
	(0.0018)	(0.0019)	(0.0026)	(0.0027)	(0.0025)	(0.0025)	(0.0028)	(0.0026)	(0.0024)	(0.0025)
Child Characteristics										
Girls	0.0370*	-0.0485*	-	-	-	-	0.0146*	-0.0070*	0.0495*	-0.0733*
	(0.0015)	(0.0015)					(0.0021)	(0.0019)	(0.0020)	(0.0020)
Biological Child	0.0311*	-0.0660*	0.0191*	-0.0410*	0.0357*	-0.0762*	0.0523*	-0.0822*	0.0106**	-0.0365*
	(0.0026)	(0.0026)	(0.0040)	(0.0041)	(0.0032)	(0.0030)	(0.0033)	(0.0028)	(0.0037)	(0.0038)
Household Head's Characteristics										
Age	0.0005*	-0.0006*	0.0003***	-0.0003**	0.0006*	-0.0009*	0.0009*	-0.0011*	0.0002***	-0.0002**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0155	-0.0222	0.0150	-0.0346	0.0269	-0.01-4	0.0512	-0.0470	-0.0128	-0.00003
	(0.0249)	(0.0296)	(0.0363)	(0.0397)	(0.0337)	(0.0402)	(0.0413)	(0.0414)	(0.0319)	(0.0401)
Household Head's Education										
Completed Primary	0.0336*	-0.0271*	0.0355*	-0.0283*	0.0313*	-0.0254*	0.0217*	-0.0249*	0.0377*	-0.0283*
	(0.0030	(0.0031)	(0.0042)	(0.0045)	(0.0040)	(0.0042)	(0.0057)	(0.0057)	(0.0036)	(0.0039)
Junior Secondary	0.0785*	-0.0536*	0.0884*	-0.0622*	0.0656*	-0.0411*	0.0512*	-0.0437*	0.0900*	-0.0589*
	(0.0036)	(0.0037)	(0.0051)	(0.0053)	(0.0048)	(0.0050)	(0.0063)	(0.0062)	(0.0046)	(0.0047)
Senior Secondary	0.0983*	-0.0715*	0.1183*	-0.0856*	0.0740*	-0.0525*	0.0746*	-0.0592*	0.1033*	-0.0743*
	(0.0039)	(0.0039)	(0.0056)	(0.0057)	(0.0051)	(0.0052)	(0.0064)	(0.0063)	(0.0051)	(0.0052)
Tertiary Education	0.1186*	-0.0662*	0.1518*	-0.1036*	0.0880*	-0.0383*	0.0819*	-0.0512*	0.1473*	-0.0903*
	(0.0060)	(0.0053)	(0.0095)	(0.0085)	(0.0074)	(0.0065)	(0.0079)	(0.0069)	(0.0097)	(0.0086)
Household Head's Employment										
Employer	0.0127*	-0.0316*	0.0175*	-0.0375*	0.0116*	-0.0151*	0.0189*	-0.0246*	0.0181*	-0.0261*
	(0.0025)	(0.0027)	(0.0036)	(0.0038)	(0.0032)	(0.0033)	(0.0037)	(0.0033)	(0.0034)	(0.0036)
Employee	0.0076**	-0.0026	0.0106**	-0.0085**	0.0038	-0.0044	0.0012	-0.0026	0.0108**	-0.0099**
	(0.0022)	(0.0024)	(0.0033)	(0.0036)	(0.0030)	(0.0032)	(0.0027)	(0.0027)	(0.0032)	(0.0036)
Casual Worker	-0.0183**	0.0251*	-0.0271**	0.0339*	-0.0070	0.0141***	-0.0129***	0.0105	-0.0195**	0.0324**
	(0.0060)	(0.0065)	(0.0085)	(0.0097)	(0.0083)	(0.0085)	(0.0075)	(0.0075)	(0.0084)	(0.0094)

Table 4-13: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2007 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Unpaid Worker	0.0141**	0.0304*	0.0279**	0.0312**	0.0031	0.0210**	-0.0066	0.0079	0.0284**	0.0298**
	(0.0069)	(0.0067)	(0.0102)	(0.0098)	(0.0089)	(0.0084)	(0.0108)	(0.0106)	(0.0089)	(0.0087)
Others	-0.0099**	0.0191*	-0.0067	0.0169**	-0.0102***	0.0180**	-0.0062	0.0086***	-0.0076	0.0219**
	(0.0044)	(0.0047)	(0.0064)	(0.0070)	(0.0057)	(0.0059)	(0.0051)	(0.0050)	(0.0065)	(0.0072)
Spouse's Characteristics										
Spouse's Education										
Completed Primary	0.0368*	-0.0341*	0.0399*	-0.0387*	0.0321*	-0.0267*	0.0300*	-0.0213*	0.0402*	-0.0389*
	(0.0025)	(0.0027)	(0.0036)	(0.0038)	(0.0034)	(0.0036)	(0.0046)	(0.0046)	(0.0031)	(0.0034)
Junior Secondary	0.0837*	-0.0601*	0.0892*	-0.0689*	0.0750*	-0.0458*	0.0596*	-0.0402*	0.0970*	-0.0678*
	(0.0033)	(0.0034)	(0.0048)	(0.0050)	(0.0045)	(0.0046)	(0.0053)	(0.0053)	(0.0044)	(0.0045)
Senior Secondary	0.1080*	-0.0738*	0.1205*	-0.0862*	0.0904*	-0.0550*	0.0809*	-0.0516*	0.1224*	-0.0800*
	(0.0040)	(0.0039)	(0.0059)	(0.0057)	(0.0053)	(0.0051)	(0.0058)	(0.0056)	(0.0058)	(0.0054)
Tertiary Education	0.1126*	-0.0682*	0.1490*	-0.1058*	0.0873*	-0.0460*	0.0851*	-0.0424*	0.1436*	-0.1035*
	(0.0068)	(0.0059)	(0.0115)	(0.0100)	(0.0079)	(0.0069)	(0.0078)	(0.0066)	(0.0120)	(0.0106)
Spouse's Employment										
Employer	-0.0006	0.0935*	0.0113**	0.0754*	-0.0097**	0.1015*	0.0017	0.0804*	0.00004	0.0883*
	(0.0036)	(0.0036)	(0.0052)	(0.0053)	(0.0047)	(0.0045)	(0.0048)	(0.0041)	(0.0050)	(0.0051)
Employee	-0.0205*	0.0147*	-0.0160**	0.0064	-0.0247*	0.0201*	-0.0108**	0.0094**	-0.0281*	0.0183**
	(0.0037)	(0.0039)	(0.0054)	(0.0058)	(0.0048)	(0.0049)	(0.0042)	(0.0040)	(0.0054)	(0.0059)
Casual Worker	-0.0245**	0.0431*	-0.0239**	0.0531*	-0.0233**	0.0229***	-0.0028	0.0123	-0.0348**	0.0530*
	(0.0084)	(0.0091)	(0.0118)	(0.0048)	(0.0115)	(0.0120)	(0.0122)	(0.0118)	(0.0112)	(0.0125)
Unpaid Worker	-0.0096**	0.0582*	-0.0008	0.0559*	-0.0170*	0.0590*	-0.0043	0.0387*	-0.0101**	0.0553*
	(0.0032)	(0.0033)	(0.0045)	(0.0132)	(0.0043)	(0.0044)	(0.0047)	(0.0044)	(0.0044)	(0.0046)
Others	0.0045	-0.0312*	0.0105**	-0.0334*	-0.0005	-0.0359*	0.0083**	-0.0148*	0.0035	-0.0476*
	(0.0029)	(0.0031)	(0.0042)	(0.0044)	(0.0039)	(0.0041)	(0.0034)	(0.0033)	(0.0042)	(0.0045)
Income (Rp.)										
Household Income	0.0211*	-0.0073*	0.0321*	-0.0200*	0.0134*	-0.0001	0.0132*	-0.0016	0.0343*	-0.0227*
	(0.0014)	(0.0016)	(00023)	(0.0024)	(0.0015)	(0.0015)	(0.0014)	(0.0011)	(0.0024)	(0.0025)
Square of HH Income	-0.0005*	0.0003**	-0.0010*	0.0008*	-0.0003*	0.0001	-0.0003*	0.0001**	-0.0014*	0.0015*
	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0003)	(0.0002)
Household Characteristics										
Birth Order	-0.0293*	0.0299*	-0.0338*	0.0386*	-0.0235*	0.0193*	-0.0217*	0.0164*	-0.0326*	0.0376*
	(0.0023)	(0.0022)	(0.0034)	(0.0032)	(0.0031)	(0.0028)	(0.0034)	(0.0031)	(0.0031)	(0.0029)

Table 4-13: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2007 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Child Aged 0-5 years	0.0083**	-0.0115*	0.0084**	-0.0177*	0.0087**	-0.0054***	0.0030	-0.0035	0.0108**	-0.0179*
	(0.0026)	(0.0025)	(0.0037)	(0.0036)	(0.0034)	(0.0032)	(0.0037)	(0.0035)	(0.0034)	(0.0033)
Child Aged 6-9 years	0.0145*	-0.0159*	0.0176*	-0.0231*	0.0112**	-0.0077**	0.0104**	-0.0028	0.0164*	-0.0246*
	(0.0026)	(0.0025)	(0.0037)	(0.0037)	(0.0034)	(0.0032)	(0.0038)	(0.0036)	(0.0034)	(0.0034)
Child Aged 10-14 years	0.0095*	-0.0140*	0.0097**	-0.0186*	0.0090**	-0.0078**	0.0054	-0.0079**	0.0109*	-0.0178*
	(0.0023)	(0.0021)	(0.0034)	(0.0032)	(0.0031)	(0.0027)	(0.0034)	(0.0032)	(0.0030)	(0.0028)
Child Aged 15-17 years	-0.0011	-0.0057*	-0.0028	-0.0079**	0.0007	-0.0029	-0.0004	-0.0016	-0.0012	-0.0095*
	(0.0015)	(0.0015)	(0.0023)	(0.0023)	(0.0020)	(0.0019)	(0.0022)	(0.0021)	(0.0020)	(0.0020)
Number of Adults	-0.0025**	0.0096*	-0.0051*	-0.0098*	-0.0005	-0.0071*	-0.0022**	-0.0068*	-0.0033**	-0.0099*
	(0.0007)	(0.0008)	(0.0011)	(0.0012)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0010)	(0.0011)
Rural	-0.0211*	0.0312*	-0.0287*	0.0463*	-0.0121*	0.0127*	-	-	-	-
	(0.0019)	(0.0020)	(0.0028)	(0.0029)	(0.0025)	(0.0025)				
Province										
NAD	0.1093*	-0.0797*	0.0954*	-0.0664*	0.1153*	-0.0877*	0.0615*	-0.0337**	0.1286*	-0.1025*
	(0.0064)	(0.0063)	(0.0096)	(0.0093)	(0.0080)	(0.0081)	(0.0138)	(0.0128)	(0.0077)	(0.0078)
North Sumatera	0.0578*	0.0355*	0.0430*	0.0495*	0.0674*	0.0207**	0.0180	0.0150	0.0760*	0.0498*
	(0.0055)	(0.0052)	(0.0085)	(0.0080)	(0.0066)	(0.0062)	(0.0014)	(0.0108)	(0.0069)	(0.0066)
West Sumatera	0.0333*	-0.0372*	0.0075	-0.0144	0.0539*	-0.0567*	0.0132	0.0061	0.0389*	-0.0582*
	(0.0061)	(0.0061)	(0.0093)	(0.0092)	(0.0075)	(0.0077)	(0.0124)	(0.0114)	(0.0075)	(0.0079)
Riau	0.0571*	-0.0390*	0.0374*	-0.0105	0.0700*	-0.0683*	0.0215	0.0082	0.0695*	-0.0597*
	(0.0068)	(0.0068)	(0.0102)	(0.0099)	(0.0087)	(0.0094)	(0.0134)	(0.0122)	(0.0085)	(0.0088)
Jambi	0.0208**	-0.0582*	-0.0135	-0.0339**	0.0531*	-0.0824*	-0.0146	0.0166	0.0308*	-0.0919*
	(0.0067)	(0.0070)	(0.0100)	(0.0102)	(0.0088)	(0.0095)	(0.0135)	(0.0123)	(0.0083)	(0.0091)
South Sumatera	0.0284*	-0.0372*	-0.0087	-0.0181***	0.0647*	-0.0530*	0.0124	0.0064	0.0339*	-0.0571*
	(0.0061)	(0.0062)	(0.0092)	(0.0092)	(0.0078)	(0.0078)	(0.0124)	(0.0117)	(0.0075)	(0.0079)
Bengkulu	0.0526*	-0.0601*	0.0166	-0.0360*	0.0889*	-0.0835*	0.0189	0.0062	0.0658*	-0.0883*
	(0.0070)	(0.0071)	(0.0104)	(0.0103)	(0.0094)	(0.0093)	(0.0147)	(0.0131)	(0.0086)	(00089)
Lampung	0.0214**	0.0089	-0.0147	0.0402*	0.0621*	-0.0310*	-0.0065	0.0237**	0.0335*	-0.0012
	(0.0064)	(0.0063)	(0.0095)	(0.0092)	(0.0085)	(0.0084)	(0.0130)	(0.0121)	(0.0078)	(0.0079)
Bangka-Belitung	-0.0120	0.0460*	-0.0504*	0.0857*	0.0245**	0.0057	-0.0221	0.0349**	-0.0135	0.05818
	(0.0078)	(0.0077)	(0.0115)	(0.0113)	(0.0103)	(0.0101)	(0.0134)	(0.0126)	(0.0103)	(0.0104)
Riau Islands	0.0596*	-0.0289**	0.0435**	-0.0108	0.0692*	-0.0413**	0.0229***	0.0004	0.0843*	-0.0434*
	(0.0095)	(0.0095)	(0.0141)	(0.0137)	(0.0121)	(0.0124)	(0.0137)	(0.0125)	(0.0141)	(0.0155)

Table 4-13: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children, SUSENAS 2007 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
DKI Jakarta	-0.0144***	0.0022	-0.0002	-0.0389**	-0.0105	0.0100	-0.0204***	0.0121	-	-
	(0.0076)	(0.0079)	(0.0124)	(0.0139)	(0.0085)	(0.0086)	(0.0116)	(0.0110)		
West Java	-0.0074	-0.0471*	-0.0225**	-0.0604*	0.0063	-0.0313*	-0.0135	-0.0001	-0.0113***	-0.0850*
	(0.0054)	(0.0057)	(0.0083)	(0.0088)	(0.0064)	(0.0068)	(0.0111)	(0.0107)	(0.0068)	(0.0078)
Central Java	0.0236*	-0.0490*	0.0006	-0.0479*	0.0435*	-0.0459*	0.0046	-0.0038	0.0286*	-0.0773*
	(0.0054)	(0.0055)	(0.0083)	(0.0083)	(0.0065)	(0.0068)	(0.0112)	(0.0107)	(0.0067)	(0.0072)
DIY	0.0499*	-0.0013	0.0437**	0.0008	0.0501*	-0.0042	0.0128	0.0164	0.0704*	-0.0116
	(0.0115)	(0.0101)	(0.0177)	(0.0149)	(0.0140)	(0.0124)	(0.0170)	(0.0143)	(0.0155)	(0.0140)
East Java	0.0478*	-0.0375*	0.0412*	-0.0266**	0.0499*	-0.0472*	0.0256**	-0.0064	0.0546*	-0.0531*
	(0.0055)	(0.0055)	(0.0084)	(0.0082)	(0.0065)	(0.0067)	(0.0114)	(0.0108)	(0.0068)	(0.0070)
Banten	0.0070	-0.0750*	-0.0050	-0.0935*	0.0168**	-0.0527*	0.0007	-0.0091	0.0046	-0.1212*
	(0.0066)	(0.0081)	(0.0100)	(0.0123)	(0.0081)	(0.0097)	(0.0123)	(0.0122)	(0.0086)	(0.0114)
Bali	0.0285*	0.0658*	0.0411**	0.0579*	0.0156***	0.0685*	0.0127	0.0520*	0.0296**	0.0783*
	(0.0076)	(0.0069)	(0.0120)	(0.0106)	(0.0087)	(0.0082)	(0.0135)	(0.0117)	(0.0098)	(0.0094)
West Nusa Tenggara	0.0571*	0.0040	0.0447*	0.0051	0.0657*	0.0038	0.0281**	0.0136	0.0682*	0.0005
	(0.0071)	(0.0068)	(0.0108)	(0.0104)	(0.0088)	(0.0082)	(0.0131)	(0.0120)	(0.0091)	(0.0090)
East Nusa Tenggara	0.0207*	-0.0002	0.0008	0.0127	0.0361*	-0.0113	0.0458**	-0.0215***	0.0188**	0.0020
	(0.0057)	(0.0056)	(0.0087)	(0.0085)	(0.0070)	(0.0069)	(0.0140)	(0.0128)	(0.0069)	(0.0069)
West Kalimantan	0.0316*	-0.0245*	0.0083	-0.0093	0.0508*	-0.0357*	-0.0048	0.0026	0.0433*	-0.0341*
	(0.0061)	(0.0060)	(0.0093)	(0.0090)	(0.0075)	(0.0075)	(0.0128)	(0.0126)	(0.0075)	(0.0075)
Central Kalimantan	0.0380*	0.0024	0.0128	0.0264**	0.0593*	-0.0209**	0.0099	0.0312**	0.0476*	-0.0093
	(0.0062)	(0.0061)	(0.0094)	(0.0092)	(0.0078)	(0.0077)	(0.0131)	(0.0119)	(0.0076)	(0.0077)
South Kalimantan	-0.0054	-0.0075	-0.0266**	0.0016	0.0129***	-0.0140***	-0.0155	0.0177	-0.0035	-0.0173*
	(0.0063)	(0.0063)	(0.0096)	(0.0095)	(0.0076)	(0.0079)	(0.0127)	(0.0121)	(0.0077)	(0.0080)
East Kalimantan	0.0514*	-0.0712*	0.0222**	-0.0522*	0.0766*	-0.0858*	0.0197	-0.0261**	0.0666*	-0.0952*
	(0.0070)	(0.0074)	(0.0105)	(0.0107)	(0.0090)	(0.0099)	(0.0124)	(0.0120)	(0.0093)	(0.0101)
North Sulawesi	-0.0056	-0.0004	-0.0473*	0.0424*	0.0372*	-0.0579*	-0.0194	0.0229***	-0.0027	-0.0127
	(0.0068)	(0.0071)	(0.0101)	(0.0101)	(0.0091)	(0.0106)	(0.0133)	(0.0127)	(0.0085)	(0.0091)
Central Sulawesi	0.0064	0.0343*	-0.0352*	0.0834*	0.0382*	-0.0249**	0.0010	0.0334**	0.0030	0.0336*
	(0.0018)	(0.0064)	(0.0096)	(0.0094)	(0.0087)	(0.0088)	(0.0150)	(0.0131)	(0.0078)	(0.0080)
South Sulawesi	0.0064	0.0397*	-0.0283**	0.0838*	0.0401*	-0.0125***	-0.0108	0.0262**	0.0109	0.0473*
	(0.0056)	(0.0054)	(0.0085)	(0.0081)	(0.0069)	(0.0069)	(0.0119)	(0.0112)	(0.0068)	(0.0068)
Southeast Sulawesi	0.0316*	0.0536*	0.0070	0.0963*	0.0524*	0.0041	-0.0166	0.0200	0.0465*	0.0637*
	(0.0064)	(0.0059)	(0.0095)	(0.0088)	(0.0084)	(0.0077)	(0.0138)	(0.0125)	(0.0078)	(0.0074)

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Gorontalo	-0.0215**	0.0213**	-0.0724*	0.0567*	0.0296**	-0.0140	-0.0095	0.0017	-0.0263**	0.0256**
	(0.0071)	(0.0074)	(0.0107)	(0.0108)	(0.0092)	(0.0097)	(0.0148)	(0.0147)	(0.0087)	(0.0093)
West Sulawesi	0.0094	0.0206**	-0.0255**	0.0597*	0.0436*	-0.0256**	-0.0412**	0.0018	0.0256**	0.0223**
	(0.0078)	(0.0075)	(0.0113)	(0.0107)	(0.0108)	(0.0108)	(0.0166)	(0.0149)	(0.0093)	(0.0094)
Maluku	0.0086*	-0.0268*	0.0757*	-0.0149	0.0885*	-0.0341*	0.0687*	-0.0115	0.0958*	-0.0355*
	(0.0081)	(0.0075)	(0.0120)	(0.0112)	(0.0102)	(0.0093)	(0.0172)	(0.0141)	(0.0098)	(0.0095)
North Maluku	0.0766*	-0.0176**	0.0472*	0.0015	0.1044*	-0.0331*	0.0273***	0.0302**	0.0925*	-0.0356*
	(0.0079)	(0.0075)	(0.0115)	(0.0112)	(0.0112)	(0.0094)	(0.0161)	(0.0134)	(0.0097)	(0.0095)
West Papua	0.0150	-0.0396*	0.0292**	-0.0396**	0.0047	-0.0366**	0.0141	-0.0383**	0.0149	-0.0434*
	(0.0092)	(0.0090)	(0.0149)	(0.0138)	(0.0105)	(0.0109)	(0.0175)	(0.0191)	(0.0115)	(0.0112)
ρ	-0.7001*		-0.6875*		-0.7148*		-0.7275*		-0.6928*	
	(0.0042)		(0.0055)		(0.0067)		(0.0082)		(0.0049)	
Wald Test Chi^2	32516.6*		201156.1*		12199.5*		7997.2*		24698.2*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	11074.9*		6592.7*		4257.0*		2831.6*		8132.5*	
Log-likelihood	-81394.931		-49255.003		-31214.242		-20159.765		-60437.770	
Number of Observations	156,248		85,026		71,222		54,188		102,060	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Age Groups								
10 to 12 years	0.0627*	-0.0613*	0.0584*	-0.0450*	0.1321*	-0.1256*	0.0785*	-0.0688*
	(0.0052)	(0.0049)	(0.0051)	(0.0046)	(0.0043)	(0.0042)	(0.0039)	(0.0038)
15 to 17 years	-0.0846*	-0.0068*	-0.0655*	0.0566*	-0.1533*	0.1404*	-0.0994*	0.0875*
	(0.0040)	(0.0037)	(0.0038)	(0.0036)	(0.0033)	(0.0036)	(0.0032)	(0.0033)
Child Characteristics								
Biological Child	0.0321*	-0.0484*	0.0607*	-0.0999*	0.0082	-0.0285*	0.0115**	-0.0414*
	(0.0052)	(0.0044)	(0.0042)	(0.0035)	(0.0055)	(0.0057)	(0.0047)	(0.0047)
Household Head's Characteristics								
Age	0.0009*	-0.0010*	0.0007*	-0.0009*	-0.0001	0.0001	0.0005**	-0.0006*
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Female Headed	0.0482	-0.0298	-0.4799*	0.4970*	-0.0192	-0.0375	0.0089	-0.0253
	(0.0465)	(0.0042)	(0.0214)	(0.0191)	(0.0505)	(0.0525)	(0.0390)	(0.0051)
Household Head's Education								
Completed Primary	0.0159**	0.0271*	0.0314*	-0.0216**	0.0429*	-0.0302*	0.0312*	-0.0253*
	(0.0078)	(0.0074)	(0.0084)	(0.0088)	(0.0052)	(0.0057)	(0.0048)	(0.0051)
Junior Secondary	0.0493*	-0.0469*	0.0555*	-0.0381*	0.1057*	-0.0719*	0.0702*	-0.0413*
	(0.0086)	(0.0080)	(0.0090)	(0.0096)	(0.0065)	(0.0069)	(0.0060)	(0.0061)
Senior Secondary	0.0826*	0.0678*	0.0680*	-0.0451*	0.1277*	-0.0918*	0.0738*	-0.0525*
	(0.0089)	0.0083)	(0.0092)	(0.0096)	(0.0073)	(0.0076)	(0.0067)	(0.0067)
Tertiary Education	0.0923*	-0.0707*	0.0778*	-0.0344**	0.1854*	-0.1265*	0.1035*	-0.0541*
	(0.0119)	(0.0099)	(0.0108)	(0.0101)	(0.0144)	(0.0129)	(0.0123)	(0.0105)
Household Head's Employment								
Employer	0.0254*	0.0250*	0.0161**	0.0169*	0.0188*	0.0414*	0.0179*	0.0040
	(0.0053)	(0.0047)	(0.0049)	(0.0046)	(0.0049)	(0.0053)	(0.0045)	(0.0047)
Employee	-0.0012	-0.0010	-0.0010	-0.0051	-0.0161**	0.0186*	-0.0041	-0.0009
	(0.0039)	(0.0037)	(0.0037)	(0.0037)	(0.0047)	(0.0052)	(0.0043)	(0.0048)
Casual Worker	-0.0178***	0.0153	-0.0068	0.0050	-0.0307**	0.0436**	-0.0054	0.0159
	(0.0102)	(0.0103)	(0.0111)	(0.0112)	(0.0120)	(0.0139)	(0.0114)	(0.0118)
Unpaid Worker	0.0001	0.0153	-0.0095	-0.0064	0.0423**	0.0357**	0.0144	0.0182***
	(0.0151)	(0.0145)	(0.0150)	(0.0150)	(0.0131)	(0.0129)	(0.0113)	(0.0108)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Others	-0.0109	0.0119***	0.0027	0.0005	0.0019	0.0195***	-0.0172**	0.0236**
	(0.0072)	(0.0070)	(0.0072)	(0.0070)	(0.0094)	(0.0106)	(0.0085)	(0.0091)
Spouse's Characteristics								
Spouse's Education								
Completed Primary	0.0370*	-0.0272*	0.0194**	-0.0088	0.0433*	-0.0441*	0.0356*	-0.0316*
	(0.0063)	(0.0061)	(0.0067)	(0.0071)	(0.0045)	(0.0050)	(0.0041)	(0.0044)
Junior Secondary	0.0622*	-0.0472*	0.0529*	-0.0242**	0.1076*	-0.0801*	0.0818*	-0.0511*
	(0.0073)	(0.0070)	(0.0077)	(0.0081)	(0.0064)	(0.0066)	(0.0058)	(0.0058)
Senior Secondary	0.0950*	-0.0608*	0.0619*	-0.0336*	0.1325*	-0.0944*	0.1072*	-0.0599*
	(0.0081)	(0.0074)	(0.0082)	(0.0083)	(0.0083)	(0.0080)	(0.0079)	(0.0069)
Tertiary Education	0.1161*	-0.0656*	0.0638*	-0.0216**	0.1659*	-0.1300*	0.1171*	-0.00774*
	(0.0129)	(0.0100)	(0.0101)	(0.0092)	(0.0181)	(0.0166)	(0.0148)	(0.0126)
Spouse's Employment								
Employer	0.0111	0.0621*	-0.0041	0.0924*	0.0090	0.0757*	-0.0083	0.0938*
	(0.0069)	(0.0058)	(0.0066)	(0.0057)	(0.0072)	(0.0076)	(0.0066)	(0.0064)
Employee	-0.0074	0.0070	-0.0150**	0.0111**	-0.0232**	0.0050	-0.0329*	0.0312*
	(0.0060)	(0.0058)	(0.0057)	(0.0054)	(0.0079)	(0.0088)	(0.0071)	(0.0074)
Casual Worker	-0.0020	0.0238	-0.0098	-0.0112	-0.0044	0.0697*	-0.0326**	0.0305***
	(0.0163)	(0.0155)	-0.0054	(0.0192)	(0.0062)	(0.0185)	(0.0149)	(0.0157)
Unpaid Worker	0.0009	0.0323*	(0.0187)	0.0442*	-0.0353**	0.0586*	-0.0165**	0.0516*
	(0.0067)	(0.0060)	(0.0066)	(0.0063)	(0.0158)	(0.0067)	(0.0060)	(0.0060)
Others	0.0142**	0.0153**	0.0030	-0.0176*	0.0067	-0.0449*	0.00002	-0.0558*
	(0.0048)	(0.0046)	(0.0048)	(0.0048)	(0.0060)	(0.0065)	(0.0057)	(0.0061)
Income (Rp.)								
Household Income	0.0216*	-0.0098*	0.0086*	0.0024**	0.0428*	-0.0302*	0.0245*	-0.0141*
	(0.0024)	(0.0020)	(0.0015)	(0.0012)	(0.0035)	(0.0037)	(0.0031)	(0.0031)
Square of HH Income	-0.0006*	0.0004**	-0.0002*	0.00002	-0.0017*	0.0017*	-0.0011*	0.0011*
	(0.0001)	(0.0001)	(0.00004)	(0.00004)	(0.0005)	(0.0003)	(0.0003)	(0.0002)
Household Characteristics								
Birth Order	-0.0253*	0.0157*	-0.0178*	0.0167*	-0.0370*	0.0500*	-0.0273*	0.0229*
	(0.0047)	(0.0044)	(0.0047)	(0.0042)	(0.0045)	(0.0044)	(0.0041)	(0.0037)
Child Aged 0-5 years	0.0061	-0.0033	0.0012	-0.0059	0.0083***	-0.0254*	0.0144**	-0.0097**
	(0.0053)	(0.0049)	(0.0051)	(0.0048)	(0.0049)	(0.0049)	(0.0045)	(0.0042)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Aged 6-9 years	0.0127**	-0.0007	0.0082	-0.0054	0.0191*	-0.0351*	0.0140**	-0.0127**
	(0.0053)	(0.0050)	(0.0054)	(0.0048)	(0.0049)	(0.0050)	(0.0045)	(0.0043)
Child Aged 10-14 years	0.0047	-0.0040	0.0061	-0.0112**	0.0112**	-0.0264*	0.0108**	-0.0078**
	(0.0049)	(0.0045)	(0.0048)	(0.0042)	(0.0044)	(0.0042)	(0.0040)	(0.0035)
Child Aged 15-17 years	-0.0047	0.0011	0.0042	-0.0050***	-0.0017	-0.0134*	-0.0006	-0.0046***
	(0.0031)	(0.0030)	(0.0030)	(0.0027)	(0.0030)	(0.0030)	(0.0026)	(0.0025)
Number of Adults	-0.0061*	-0.0039**	0.0011	-0.0078*	-0.0044**	-0.0132*	-0.0024***	-0.0053*
	(0.0015)	(0.0014)	(0.0014)	(0.0014)	(0.0015)	(0.0016)	(0.0013)	(0.0014)
Province								
NAD	0.0728*	-0.0331***	0.0570**	-0.0463**	0.1084*	-0.0853*	0.1352*	-0.1068*
	(0.0194)	(0.0176)	(0.0198)	(0.0187)	(0.0116)	(0.0117)	(0.0095)	(0.0097)
North Sumatera	0.0326**	0.0050	0.0114	0.0141	0.0579*	0.0701*	0.0849*	0.0292*
	(0.0165)	(0.0151)	(0.0156)	(0.0150)	(0.0106)	(0.0102)	(0.0081)	(0.0076)
West Sumatera	0.0327***	0.0074	-0.0005	-0.0086	0.0010	-0.0321**	0.0684*	-0.0751*
	(0.0180)	(0.0159)	(0.0169)	(0.0160)	(0.0114)	(0.0119)	(0.0092)	(0.0097)
Riau	0.0296	0.0018	0.0242	0.0027	0.0456*	-0.0202	0.0819*	-0.0987*
	(0.0188)	(0.0169)	(0.0195)	(0.0175)	(0.0126)	(0.0128)	(0.0106)	(0.0123)
Jambi	0.0047	0.0142	-0.0257	0.0028	-0.0186	-0.0600*	0.0765*	-0.1191*
	(0.0193)	(0.0170)	(0.0184)	(0.0174)	(0.0123)	(0.0132)	(0.0109)	(0.0123)
South Sumatera	0.0204	0.0002	0.0155	-0.0018	-0.0162	-0.0313**	0.0793*	-0.0730*
	(0.0176)	(0.0164)	(0.0174)	(0.0165)	(0.0113)	(0.0118)	(0.0096)	(0.0097)
Bengkulu	0.0168	0.0092	0.0362***	-0.0118	0.0204	-0.0578*	0.1062*	-0.1113*
	(0.0206)	(0.0181)	(0.0217)	(0.0188)	(0.0127)	(0.0131)	(0.0113)	(0.0115)
Lampung	-0.0011	0.0088	0.0008	0.0229	-0.0152	0.0477*	0.0831*	-0.0551*
	(0.0187)	(0.0169)	(0.0183)	(0.0167)	(0.0116)	(0.0117)	(0.0105)	(0.0105)
Bangka-Belitung	-0.0125	0.0339***	-0.0255	0.0260	-0.0668*	0.1119*	0.0371**	0.0056
	(0.0192)	(0.0174)	(0.0186)	(0.0183)	(0.0150)	(0.0154)	(0.0137)	(0.0134)
Riau Islands	0.0560**	-0.0159	-0.0036	0.0102	0.0336***	-0.0002	0.1397*	-0.0832*
	(0.0205)	(0.0175)	(0.0180)	(0.0173)	(0.0196)	(0.0215)	(0.0223)	(0.0230)
DKI Jakarta	0.0207	-0.0283***	-0.0434**	0.0300**	-	-	-	-
	(0.0170)	(0.0160)	(0.0157)	(0.0150)				
West Java	0.0106	-0.0279***	-0.0279***	0.0161	-0.0379*	-0.0898*	0.0088	-0.0650*
	(0.0162)	(0.0152)	(0.0153)	(0.0148)	(0.0105)	(0.0118)	(0.0081)	(0.0093)
Central Java	0.0243	-0.0235	-0.0061	0.0044	-0.0072	-0.0692*	0.0572*	-0.0714*
	(0.0163)	(0.0151)	(0.0154)	(0.0149)	(0.0103)	(0.0108)	(0.0081)	(0.0088)

Table 4-14: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of All Children by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
DIY	0.0657**	-0.0161	-0.0265	0.0341***	0.0393***	0.0069	0.0927*	-0.0203
	(0.0291)	(0.0215)	(0.0205)	(0.0188)	(0.0224)	(0.0202)	(0.0209)	(0.0179)
East Java	0.0537**	-0.0235	0.0059	-0.0015	0.0399*	-0.0314**	0.0592*	-0.0673*
	(0.0165)	(0.0152)	(0.0155)	(0.0150)	(0.0104)	(0.0106)	(00081)	(0.0086)
Banten	0.0297***	-0.0364**	-0.0179	0.0064	-0.0207	-0.1357*	0.0225**	-0.0910*
	(0.0178)	(0.0177)	(0.0169)	(0.0165)	(0.0130)	(0.0168)	(0.0104)	(0.0140)
Bali	0.0556**	0.0132	-0.0208	0.0780*	0.0366**	0.0824*	0.0198***	0.0709*
	(0.0202)	(0.0167)	(0.0178)	(0.0161)	(0.0155)	(0.0147)	(0.0111)	(0.0107)
West Nusa Tenggara	0.0612**	-0.0125	0.0032	0.0298***	0.0408**	0.0109	0.0877*	-0.0023
	(0.0193)	(0.0170)	(0.0176)	(0.0166)	(0.0138)	(0.0138)	(0.0114)	(0.0105)
East Nusa Tenggara	0.0640**	-0.0279	0.0314***	-0.0228	-0.0095	0.0206***	0.0387*	-0.0096
	(0.0204)	(0.0180)	(0.0187)	(0.0177)	(0.0105)	(0.0106)	(0.0082)	(0.0082)
West Kalimantan	0.0091	-0.0068	-0.0080	-0.0041	0.0117	-0.0139	0.0658*	-0.0450*
	(0.0184)	(0.0172)	(0.0178)	(0.0186)	(0.0114)	(0.0113)	(0.0089)	(0.0089)
Central Kalimantan	0.0213	0.0283***	0.0076	0.0193	0.0132	0.0216***	0.0736*	-0.0337*
	(0.0186)	(0.0165)	(0.0185)	(0.0172)	(0.0114)	(0.0117)	(0.0094)	(0.0093)
South Kalimantan	0.0043	0.0100	-0.0287***	0.0127	-0.0343**	-0.0070	0.0212**	-0.0201**
	(0.0184)	(0.0168)	(0.0174)	(0.0170)	(0.0118)	(0.0121)	(0.0093)	(0.0096)
East Kalimantan	0.0317***	-0.0386**	0.0157	-0.0202	0.0260***	-0.0637*	0.1008*	-0.1232*
	(0.0179)	(0.0169)	(0.0174)	(0.0167)	(0.0138)	(0.0145)	(0.0123)	(0.0145)
North Sulawesi	-0.0126	0.0210	-0.0152	0.0081	-0.0587*	0.0469*	0.0512*	-0.0877*
	(0.0188)	(0.0174)	(0.0188)	(0.0183)	(0.0125)	(0.0131)	(0.0113)	(0.0141)
Central Sulawesi	0.0125	0.0451**	-0.0086	0.0143	-0.0464*	0.0965*	0.0495*	-0.0369*
	(0.0220)	(0.0179)	(0.0200)	(0.0190)	(0.0115)	(0.0118)	(0.0104)	(0.0106)
South Sulawesi	-0.0086	0.0272***	0.0002	0.0059	-0.0325**	0.1060*	0.0486*	-0.0144***
	(0.0170)	(0.0155)	(0.0168)	(0.0160)	(0.0103)	(0.0103)	(0.0083)	(0.0084)
Southeast Sulawesi	-0.0050	0.0172	-0.0198	0.0077	0.0125	0.1219*	0.0722*	0.0031
	(0.0195)	(0.0172)	(0.0194)	(0.0179)	(0.0115)	(0.0111)	(0.0100)	(0.0092)
Gorontalo	-0.0022	-0.0010	-0.0088	-0.0030	-0.0943*	0.0748*	0.0396*	-0.0181
	(0.0218)	(0.0209)	(0.0198)	(0.0198)	(0.0130)	(0.0138)	(0.0113)	(0.0120)
West Sulawesi	-0.0389***	0.0159	-0.0363	-0.0621**	-0.0200	0.0726*	0.0677*	-0.0290**
	(0.0231)	(0.0192)	(0.0239)	(0.0305)	(0.0134)	(0.0137)	(0.0127)	(0.0129)
Maluku	0.0993*	-0.0056	0.0441***	-0.0300	0.0774*	-0.0253***	0.1024*	-0.0364**
	(0.0251)	(0.0191)	(0.0231)	(0.0206)	(0.0147)	(0.0143)	(0.0122)	(0.0113)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
North Maluku	0.0288	0.0255	0.0353	0.0266	0.0551*	-0.0102	0.1238*	-0.0511*
	(0.0221)	(0.0191)	(0.0247)	(0.0185)	(0.0141)	(0.0142)	(0.0132)	(0.0118)
West Papua	0.0492***	-0.0414	-0.0134	-0.0340	0.0263	-0.0435**	0.0066	-0.0401**
	(0.0285)	(0.0275)	(0.0218)	(0.0263)	(0.0183)	(0.0173)	(0.0128)	(0.0131)
ρ	-0.6891*		-0.7745*		-0.6906*		-0.6936*	
	(0.0117)		(0.0113)		(0.0062)		(0.0083)	
Wald Test Chi^2	4190.5*		5154.0*		15864.4*		8585.4*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	1431.8*		1335.5*		5128.4*		2864.2*	
Log-likelihood	-11200.591		-8609.470		-37741.620		-22193.534	
Number of Observations	28,590		25,598		56,436		45,624	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Child Characteristics										
Girls	0.0169*	-0.0283*	-	-	-	-	0.0074*	-0.0019	0.0221*	-0.0426*
	(0.0013)	(0.0015)					(0.0018)	(0.0016)	(0.0017)	(0.0020)
Biological Child	0.0038***	-0.0168*	0.0028	-0.0108**	0.0062***	-0.0208*	0.0163*	-0.0212*	-0.0029	-0.0101**
	(0.0026)	(0.0030)	(0.0040)	(0.0045)	(0.0033)	(0.0037)	(0.0033)	(0.0031)	(0.0036)	(0.0042)
Household Head's Characteristics										
Age	-0.0001	0.0001	-0.0001	0.0002	-0.0001	-0.0001	0.0001	-0.0003**	-0.0002**	0.0003**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0306	0.0013	0.0202	-0.0482	0.3412*	0.0290	0.0248	-0.0186	0.0301	0.0144
	(0.0238)	(0.0249)	(0.0312)	(0.0432)	(0.0138)	(0.0280)	(0.0262)	(0.0266)	(0.0343)	(0.0344)
Household Head's Education										
Completed Primary	0.0241*	-0.0192*	0.0280*	-0.0219*	0.0197*	-0.0162*	0.0083***	-0.0118**	0.0297*	-0.0225*
	(0.0024)	(0.0029)	(0.0034)	(0.0044)	(0.0031)	(0.0038)	(0.0044)	(0.0047)	(0.0030)	(0.0038)
Junior Secondary	0.0472*	-0.0276*	0.0569*	-0.0376*	0.0364*	-0.0170*	0.0235*	-0.0160**	0.0566*	-0.0336*
	(0.0030)	(0.0034)	(0.0044)	(0.0052)	(0.0039)	(0.0044)	(0.0049)	(0.0051)	(0.0039)	(0.0046)
Senior Secondary	0.0532*	-0.0342*	0.0681*	-0.0430*	0.0371*	-0.0241*	0.0301*	-0.0231*	0.0604*	-0.0382*
	(0.0033)	(0.0037)	(0.0048)	(0.0055)	(0.0042)	(0.0047)	(0.0050)	(0.0052)	(0.0044)	(0.0049)
Tertiary Education	0.0642*	-0.0359*	0.0811*	-0.0490*	0.0474*	-0.0240*	0.0315*	-0.0207*	0.0913*	-0.0469*
	(0.0055)	(0.0053)	(0.0090)	(0.0082)	(0.0066)	(0.0064)	(0.0064)	(0.0058)	(0.0100)	(0.0082)
Household Head's Employment										
Employer	0.0087*	0.0219*	0.0116*	0.0266*	0.0068**	0.0131*	0.0094**	0.0110*	0.0127*	0.0247*
	(0.0022)	(0.0026)	(0.0033)	(0.0039)	(0.0028)	(0.0033)	(0.0031)	(0.0028)	(0.0030)	(0.0038)
Employee	-0.0046**	0.0049***	-0.0051***	0.0057	-0.0036	0.0032	-0.0025	0.0006	-0.0047***	0.0079**
	(0.0019)	(0.0025)	(0.0029)	(0.0038)	(0.0025)	(0.0032)	(0.0022)	(0.0022)	(0.0028)	(0.0038)
Casual Worker	-0.0155**	0.0261*	-0.0237**	0.0392*	-0.0069	0.0105	-0.0059	0.0104***	-0.0211**	0.0341*
	(0.0050)	(0.0062)	(0.0072)	(0.0092)	(0.0068)	(0.0082)	(0.0059)	(0.0062)	(0.0070)	(0.0089)
Unpaid Worker	0.0105***	0.0237*	0.0203**	0.0234**	0.0024	0.0203**	-0.0052	0.0095	0.0202**	0.0270**
	(0.0058)	(0.0058)	(0.0090)	(0.0091)	(0.0073)	(0.0071)	(0.0085)	(0.0074)	(0.0076)	(0.0080)
Others	0.0011	0.0076	0.0072	0.0086	-0.0035	0.0061	-0.0007	0.0014	0.0070	0.0111
	(0.0041)	(0.0050)	(0.0062)	(0.0075)	(0.0051)	(0.0063)	(0.0043)	(0.0044)	(0.0063)	(0.0077)

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics										
Spouse's Education										
Completed Primary	0.0179*	-0.0216*	0.0212*	-0.0256*	0.0142*	-0.0170*	0.0124**	-0.0112**	0.0203*	-0.0261*
	(0.0021)	(0.0025)	(0.0031)	(0.0038)	(0.0028)	(0.0033)	(0.0036)	(0.0039)	(0.0027)	(0.0034)
Junior Secondary	0.0418*	-0.0302*	0.0470*	-0.0383*	0.0362*	-0.0210*	0.0248*	-0.0139**	0.0510*	-0.0381*
	(0.0029)	(0.0032)	(0.0043)	(0.0049)	(0.0039)	(0.0041)	(0.0042)	(0.0044)	(0.0039)	(0.0044)
Senior Secondary	0.0522*	-0.0360*	0.0638*	-0.0441*	0.0395*	-0.0263*	0.0349*	-0.0198*	0.0597*	-0.0421*
	(0.0036)	(0.0036)	(0.0054)	(0.0055)	(0.0046)	(0.0046)	(0.0047)	(0.0046)	(0.0052)	(0.0051)
Tertiary Education	0.0467*	-0.0362*	0.0674*	-0.0486*	0.0308*	-0.0249**	0.0304*	-0.0157**	0.0649*	-0.0542*
	(0.0062)	(0.0061)	(0.0109)	(0.0097)	(0.0069)	(0.0072)	(0.0064)	(0.0057)	(0.0120)	(0.0103)
Spouse's Employment										
Employer	0.0025	0.0690*	0.0064	0.0612*	-0.0004	0.0706*	0.0038	0.0445*	0.0015	0.0756*
	(0.0032)	(0.0035)	(0.0048)	(0.0054)	(0.0042)	(0.0044)	(0.0040)	(0.0032)	(0.0046)	(0.0052)
Employee	-0.0054	0.0070***	-0.0023	0.0036	-0.0083**	0.0098**	0.0005	0.0010	-0.0116**	0.0138**
	(0.0033)	(0.0040)	(0.0050)	(0.0062)	(0.0042)	(0.0050)	(0.0034)	(0.0034)	(0.0049)	(0.0063)
Casual Worker	-0.0018	0.0313*	0.0114	0.0420**	-0.0135	0.0158	-0.0021	-0.0017	-0.0013	0.0476*
	(0.0075)	(0.0084)	(0.0111)	(0.0126)	(0.0093)	(0.0114)	(0.0088)	(0.0101)	(0.0106)	(0.0119)
Unpaid Worker	-0.0029	0.0396*	0.0001	0.0406*	-0.0053	0.0369*	-0.0012	0.0201*	-0.0041	0.0464*
	(0.0028)	(0.0033)	(0.0041)	(0.0050)	(0.0036)	(0.0043)	(0.0038)	(0.0036)	(0.0039)	(0.0048)
Others	0.0049***	-0.0275*	0.0073***	-0.0287*	0.0029	-0.0302*	0.0067**	-0.0164*	0.0033	-0.0325*
	(0.0025)	(0.0032)	(0.0038)	(0.0048)	(0.0033)	(0.0043)	(0.0027)	(0.0029)	(0.0038)	(0.0048)
Income (Rp.)										
Household Income	0.0117*	-0.0050*	0.0174*	-0.0116*	0.0076*	-0.0012	0.0057*	-0.0011	0.0194*	-0.0107*
	(0.0013)	(0.0014)	(0.0020)	(0.0024)	(0.0015)	(0.0015)	(0.0012)	(0.0010)	(0.0023)	(0.0027)
Square of HH Income	-0.0002	0.0002**	-0.0006*	0.0006*	-0.0001*	0.0001***	-0.0001*	0.00005**	-0.0007**	0.0005**
	(0.00004)	(0.00005)	(0.0001)	(0.0001)	(0.00003)	(0.00004)	(0.00002)	(0.00002)	(0.0003)	(0.0002)
Household Characteristics										
Birth Order	-0.0541*	0.0596*	-0.0631*	0.0744*	-0.0442*	0.0422*	-0.0335*	0.0287*	-0.0642*	0.0754*
	(0.0020)	(0.0020)	(0.0030)	(0.0031)	(0.0026)	(0.0026)	(0.0028)	(0.0026)	(0.0026)	(0.0028)
Child Aged 0-5 years	0.0461*	-0.0528*	0.0527*	-0.0645*	0.0388*	-0.0389*	0.0284*	-0.0267*	0.0547*	-0.0664*
	(0.0021)	(0.0023)	(0.0032)	(0.0034)	(0.0028)	(0.0029)	(0.0030)	(0.0029)	(0.0028)	(0.0031)
Child Aged 6-9 years	0.0452*	-0.0500*	0.0534*	-0.0644*	0.0364*	-0.0332*	0.0282*	-0.0213*	0.0537*	-0.0653*
	(0.0022)	(0.0023)	(0.0033)	(0.0035)	(0.0028)	(0.0029)	(0.0031)	(0.0028)	(0.0029)	(0.0032)

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Child Aged 10-14 years	0.0207*	-0.0255*	0.0236*	-0.0322*	0.0174*	-0.0178*	0.0119*	-0.0134*	0.0250*	-0.0324*
	(0.0017)	(0.0017)	(0.0026)	(0.0026)	(0.0022)	(0.0021)	(0.0024)	(0.0022)	(0.0023)	(0.0023)
Child Aged 15-17 years	-0.0051*	-0.0020	-0.0075*	-0.0021	-0.0024***	-0.0017	-0.0029**	-0.0007	-0.0062*	-0.0036**
	(0.0011)	(0.0013)	(0.0017)	(0.0019)	(0.0014)	(0.0016)	(0.0014)	(0.0015)	(0.0015)	(0.0018)
Number of Adults	-0.0025*	-0.0048*	-0.0037*	-0.0057*	-0.0014***	-0.0031**	-0.0020**	-0.0017***	-0.0029**	-0.0062*
	(0.0007)	(0.0008)	(0.0010)	(0.0012)	(0.0008)	(0.0010)	(0.0009)	(0.0009)	(0.0009)	(0.0011)
Rural	-0.0032***	0.0202*	-0.0044***	0.0321*	-0.00017	0.0068**	-	-	-	-
	(0.0017)	(0.0021)	(0.0025)	(0.0032)	(0.0022)	(0.0026)				
Province										
NAD	0.0753*	-0.0601*	0.0737*	-0.0515*	0.0718*	-0.0633*	0.0304**	-0.0215**	0.0908*	-0.0794*
	(0.0055)	(0.0062)	(0.0082)	(0.0092)	(0.0070)	(0.0081)	(0.0107)	(0.0106)	(0.0069)	(0.0080)
North Sumatera	0.0502*	0.0265*	0.0429*	0.0438*	0.0534*	0.0108**	0.0209**	0.0037	0.0596*	0.0396*
	(0.0042)	(0.0044)	(0.0066)	(0.0070)	(0.0051)	(0.0051)	(0.0087)	(0.0084)	(0.0054)	(0.0058)
West Sumatera	0.0341*	-0.0326*	0.0204**	-0.0153***	0.0441*	-0.0448*	0.0122	-0.0037	0.0393*	-0.0499*
	(0.0047)	(0.0055)	(0.0072)	(0.0086)	(0.0059)	(0.0068)	(0.0095)	(0.0090)	(0.0060)	(0.0075)
Riau	0.0452*	-0.0394*	0.0424*	-0.0247**	0.0440*	-0.0502*	0.0079	-0.0041	0.0585*	-0.0585*
	(0.0054)	(0.0067)	(0.0084)	(0.0101)	(0.0065)	(0.0087)	(0.0097)	(0.0099)	(0.0071)	(0.0091)
Jambi	0.0307*	-0.0603*	0.0201**	-0.0447*	0.0374*	-0.0734*	0.0017	-0.0082	0.0381*	-0.0870*
	(0.0053)	(0.0073)	(0.0081)	(0.0106)	(0.0068)	(0.0103)	(0.0102)	(0.0103)	(0.0068)	(0.0099)
South Sumatera	0.0377*	-0.0455*	0.0196**	-0.0325*	0.0544*	-0.0536*	0.0178***	-0.0077	0.0430*	-0.0646*
	(0.0048)	(0.0059)	(0.0072)	(0.0090)	(0.0065)	(0.0073)	(0.0096)	(0.0095)	(0.0061)	(0.0078)
Bengkulu	0.0454*	-0.0565*	0.0257**	-0.0360*	0.0650*	-0.0750*	0.0255**	-0.0041	0.0525*	-0.0815*
	(0.0058)	(0.0069)	(0.0085)	(0.0101)	(0.0083)	(0.0098)	(0.0124)	(0.0103)	(0.0072)	(0.0092)
Lampung	0.0337*	-0.0060	0.0154**	0.0198**	0.0522*	-0.0336*	0.0052	-0.0006	0.0432*	-0.0117
	(0,0051)	(0.0056)	(0.0076)	(0.0084)	(0.0071)	(0.0075)	(0.0101)	(0.0098)	(0.0065)	(0.0073)
Bangka-Belitung	0.0173**	0.0145**	-0.0029	0.0495*	0.0353*	-0.0225**	0.0014	0.0027	0.0177**	0.0234**
	(0.0063)	(0.0073)	(0.0093)	(0.0107)	(0.0085)	(0.0104)	(0.0102)	(0.0105)	(0.0085)	(0.0102)
Riau Islands	0.0631*	-0.0279**	0.0472*	-0.0118	0.0796*	-0.0377**	0.0254**	-0.0090	0.0827*	-0.0380**
	(0.0091)	(0.0099)	(0.0127)	(0.0145)	(0.0148)	(0.0129)	(0.0112)	(0.0104)	(0.0140)	(0.0163)
DKI Jakarta	0.0315*	-0.0403*	0.0391**	-0.0406**	0.0279*	-0.0422*	0.0110	-0.0168***	-	-
	(0.0072)	(0.0101)	(0.0123)	(0.0170)	(0.0078)	(0.0111)	(0.0089)	(0.0093)		
West Java	0.0235*	-0.0502*	0.0144**	-0.0511*	0.0293*	-0.0451*	0.0081	-0.0137	0.0234*	-0.0762*
	(0.0040)	(0.0055)	(0.0064)	(0.0087)	(0.0048)	(0.0064)	(0.0084)	(0.0086)	(0.0053)	(0.0079)
Central Java	0.0371*	-0.0454*	0.0252*	-0.0418*	0.0458*	-0.0442*	0.0146***	-0.0160***	0.0421*	-0.0623*
	(0.0041)	(0.0051)	(0.0064)	(0.0079)	(0.0050)	(0.0060)	(0.0085)	(0.0087)	(0.0053)	(0.0069)

Table 4-15: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 10-14 years, SUSENAS 2007 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
DIY	0.0443*	-0.0190***	0.0323**	-0.0193	0.0526*	-0.0194***	0.0073	0.0027	0.0677*	-0.0385**
	(0.0106)	(0.0101)	(0.0159)	(0.0163)	(0.0139)	(0.0114)	(0.0126)	(0.0107)	(0.0163)	(0.0154)
East Java	0.0482*	-0.0353*	0.0470*	-0.0219**	0.0456*	-0.0451*	0.0211**	0.0168***	0.0563*	-0.0447*
	(0.0482)	(0.0049)	(0.0067)	(0.0076)	(0.0050)	(0.0059)	(0.0086)	(0.0087)	(0.0054)	(0.0065)
Banten	0.0271*	-0.0690*	0.0235**	-0.0798*	0.0278*	-0.0546*	0.0117	-0.0147	0.0289*	-0.1069*
	(00053)	(0.0091)	(0.0082)	(0.0145)	(0.0065)	(0.0106)	(0.0096)	(0.0103)	(0.0070)	(0.0134)
Bali	0.0341*	0.0386*	0.0342**	0.0430*	0.0320*	0.0332*	0.0144	0.0157***	0.0364*	0.0534*
	(0.0062)	(0.0059)	(0.0102)	(0.0094)	(0.0071)	(0.0067)	(0.0103)	(0.0091)	(0.0083)	(0.0083)
West Nusa Tenggara	0.0490*	-0.0017	0.0426*	0.0076	0.0517*	-0.0083	0.0155	0.0038	0.0607*	-0.0061
	(0.0059)	(0.0061)	(0.0090)	(0.0095)	(0.0072)	(0.0072)	(0.0099)	(0.0093)	(0.0079)	(0.0084)
East Nusa Tenggara	0.0288*	-0.0082***	0.0232*	0.0003	0.0308*	-0.0133**	0.0133	-0.0028	0.0340*	-0.0125**
	(0.0042)	(0.0048)	(0.0066)	(0.0075)	(0.0050)	(0.0056)	(0.0103)	(0.0096)	(0.0051)	(0.0061)
West Kalimantan	0.0416*	-0.0427	0.0322*	-0.0359*	0.0472*	-0.0438*	0.0112	-0.0079	0.0505*	-0.0579*
	(0.0048)	(0.0057)	(0.0073)	(0.0088)	(0.0059)	(0.0069)	(0.0098)	(0.0103)	(0.0060)	(0.0074)
Central Kalimantan	0.0486*	-0.0142**	0.0397*	0.0034	0.0533*	-0.0284*	0.0153	0.0140	0.0592*	-0.0295*
	(0.0052)	(0.0056)	(0.0078)	(0.0085)	(0.0066)	(0.0069)	(0.0101)	(0.0092)	(0.0065)	(0.0074)
South Kalimantan	0.0136**	-0.0266	-0.0002	-0.0274**	0.0242*	-0.0232**	-0.0085	-0.0030	0.0194**	-0.0391*
	(0.0048)	(0.0060)	(0.0075)	(0.0095)	(0.0058)	(0.0070)	(0.0093)	(0.0098)	(0.0061)	(0.0080)
East Kalimantan	0.0439*	-0.0537*	0.0323*	-0.0395*	0.0512*	-0.0637*	0.0119	-0.0172***	0.0579*	-0.0741*
	(0.0056)	(0.0073)	(0.0086)	(0.0107)	(0.0072)	(0.0102)	(0.0093)	(0.0099)	(0.0079)	(0.0103)
North Sulawesi	0.0118**	-0.0034	-0.0071	0.0231**	0.0279*	-0.0306*	-0.0017	0.0108	0.0136**	-0.0139
	(0.0052)	(0.0065)	(0.0079)	(0.0097)	(0.0067)	(0.0087)	(0.0100)	(0.0097)	(0.0067)	(0.0088)
Central Sulawesi	0.0221*	0.0126**	0.0085	0.0445*	0.0319*	-0.0209**	0.0112	0.0156	0.0252*	0.0100
	(0.0050)	(0.0055)	(0.0076)	(0.0084)	(0.0064)	(0.0072)	(0.0113)	(0.0097)	(0.0062)	(0.0072)
South Sulawesi	0.0141*	0.0264*	-0.0059	0.0619*	0.0320*	-0.0114**	-0.0032	0.0128	0.0176*	0.0314*
	(0.0040)	(0.0046)	(0.0062)	(0.0072)	(0.0050)	(0.0057)	(0.0087)	(0.0087)	(0.0050)	(0.0060)
Southeast Sulawesi	0.0129*	0.0373*	0.0208**	0.0694*	0.0330*	0.0044	-0.0081	0.0076	0.0395*	0.0468*
	(0.0049)	(0.0050)	(0.0075)	(0.0077)	(0.0061)	(0.0061)	(0.0100)	(0.0095)	(0.0061)	(0.0064)
Gorontalo	0.0001	0.0122***	-0.0275**	0.0348**	0.0274*	-0.0067	0.0028	-0.0070	-0.0029	0.0163**
	(0.0053)	(0.0066)	(0.0080)	(0.0100)	(0.0072)	(0.0084)	(0.0109)	(0.0123)	(0.0066)	(0.0086)
West Sulawesi	0.0200**	0.0080	0.0088	0.0315**	0.0277*	-0.0162***	-0.0283**	-0.0116	0.0372*	0.0082
	(0.0059)	(0.0066)	(0.0088)	(0.0097)	(0.0077)	(0.0089)	(0.0109)	(0.0125)	(0.0076)	(0.0086)
Maluku	0.0560*	-0.0091	0.0519*	-0.0011	0.0557*	-0.0133***	0.0191	0.0127	0.0691*	-0.0197**
	(0.0065)	(0.0064)	(0.0099)	(0.0101)	(0.0081)	(0.0075)	(0.0129)	(0.0102)	(0.0080)	(0.0084)

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
North Maluku	0.0591*	-0.0136**	0.0515*	-0.0027	0.0624*	-0.0204**	0.0226	0.0218**	0.0706*	-0.0304**
	(0.0068)	(0.0067)-	(0.0101)	(0.0102)	(0.0092)	(0.0081)	(0.0150)	(0.0098)	(0.0084)	(0.0089)
West Papua	0.0216**	0.0494*	0.0402**	-0.0505**	0.0095	-0.0446*	0.0118	-0.0077	0.0239**	-0.0664*
	(0.0068)	(0.0093)	(0.0117)	(0.0149)	(0.0075)	(0.0109)	(0.0134)	(0.0134)	(0.0086)	(0.0122)
ρ	-0.6291*		-0.6307*		-0.6256*		-0.6448*		-0.6288*	
	(0.0079)		(0.0099)		(0.0132)		(0.0183)		(0.0087)	
Wald Test Chi^2	10124.7*		6149.2*		4796.5*		2366.0*		7609.3*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	3234.1*		2056.3*		1151.3*		600.51*		2652.3*	
Log-likelihood	-36527.021		-22085.173		-14142.274		-7227.343		-29042.025	
Number of Observations	104,209		55,449		48,760		34,645		69,564	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Characteristics								
Biological Child	0.0104**	-0.0110**	0.0206*	-0.0300*	-0.0021	-0.0083	-0.0037	-0.0112**
	(0.0050)	(0.0046)	(0.0043)	(0.0040)	(0.0055)	(0.0063)	(0.0045)	(0.0052)
Household Head's Characteristics								
Age	0.0003***	-0.0003***	-0.0001	-0.0003***	-0.0003**	0.0005**	-0.0001	0.0001
	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Female Headed	0.0229	-0.0141	0.2549*	-0.2573*	0.0155	-0.0949	0.4516*	0.0490
	(0.0300)	(0.0282)	(0.0199)	(0.0189)	(0.0467)	(0.0617)	(0.0168)	(0.0358)
Household Head's Education								
Completed Primary	0.0048	-0.0148**	0.0126**	-0.0060	0.0362*	-0.0258*	0.0224*	-0.0192*
	(0.0061)	(0.0062)	(0.0060)	(0.0074)	(0.0044)	(0.0058)	(0.0039)	(0.0048)
Junior Secondary	0.0222**	-0.0215**	0.0245*	-0.0085	0.0706*	-0.0457*	0.0412*	-0.0202*
	(0.0069)	(0.0068)	(0.0066)	(0.0078)	(0.0058)	(0.0069)	(0.0051)	(0.0057)
Senior Secondary	0.0308*	-0.0243**	0.0294*	-0.0190**	0.0827*	-0.0518*	0.0373*	-0.0235*
	(0.0071)	(0.0070)	(0.0068)	(0.0079)	(0.0065)	(0.0075)	(0.0056)	(0.0062)
Tertiary Education	0.0335**	-0.0214**	0.0307*	-0.0197**	0.1136*	-0.0691*	0.0676*	-0.0243**
	(0.0099)	(0.0081)	(0.0082)	(0.0085)	(0.0156)	(0.0127)	(0.0120)	(0.0099)
Household Head's Employment								
Employer	0.0096**	0.0122**	0.0105**	0.0086**	0.0138**	0.0330*	0.0091**	0.0158**
	(0.0045)	(0.0040)	(0.0039)	(0.0040)	(0.0047)	(0.0057)	(0.0040)	(0.0052)
Employee	-0.0016	-0.0007	-0.0034	0.0019	-0.0063	0.0119**	-0.0028	0.0029
	(0.0032)	(0.0032)	(0.0030)	(0.0031)	(0.0042)	(0.0056)	(0.0037)	(0.0048)
Casual Worker	-0.0077	0.0130	-0.0036	0.0092	-0.0342**	0.0540*	-0.0080	0.0090
	(0.0084)	(0.0086)	(0.0081)	(0.0086)	(0.0101)	(0.0132)	(0.0096)	(0.0119)
Unpaid Worker	-0.0063	0.0163	-0.0046	0.0009	0.0338**	0.0240***	0.0058	0.0274**
	(0.0120)	(0.0100)	(0.0120)	(0.0103)	(0.0119)	(0.0125)	(0.0093)	(0.0099)
Others	-0.0021	0.0049	0.0022	-0.0017	0.0173***	0.0091	-0.0044	0.0144
	(0.0062)	(0.0060)	(0.0059)	(0.0063)	(0.0096)	(0.0115)	(0.0078)	(0.0098)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics								
Spouse's Education								
Completed Primary	0.0177*	-0.0173**	0.0060	-0.0017	0.0238*	-0.0295*	0.0166*	-0.0217*
	(0.0051)	(0.0052)	(0.0050)	(0.0058)	(0.0039)	(0.0051)	(0.0035)	(0.0042)
Junior Secondary	0.0295*	-0.0250*	0.0198**	0.0011	0.0588*	-0.0454*	0.0424*	-0.0297*
	(0.0060)	(0.0061)	(0.0059)	(0.0064)	(0.0058)	(0.0066)	(0.0051)	(0.0055)
Senior Secondary	0.0487*	-0.0314*	0.0203**	-0.0038	0.0684*	-0.0477*	0.0491*	-0.0347*
	(0.0070)	(0.0064)	(0.0062)	(0.0066)	(0.0076)	(0.0077)	(0.0068)	(0.0064)
Tertiary Education	0.0414*	-0.0268**	0.0195**	0.0004	0.1070*	-0.0719*	0.0371**	-0.0379**
	(0.0101)	(0.0080)	(0.0078)	(0.0079)	(0.0236)	(0.0164)	(0.0122)	(0.0119)
Spouse's Employment								
Employer	0.0028	0.0384*	0.0067	0.0483*	0.0055	0.0673*	-0.0025	0.0788*
	(0.0056)	(0.0047)	(0.0056)	(0.0044)	(0.0068)	(0.0080)	(0.0059)	(0.0065)
Employee	0.0059	0.0024	-0.0044	-0.0008	-0.0118	0.0063	-0.0107***	0.0216**
	(0.0051)	(0.0049)	(0.0044)	(0.0044)	(0.0074)	(0.0095)	(0.0064)	(0.0077)
Casual Worker	0.0039	0.0056	-0.0029	-0.0141	0.0175	0.0605**	-0.0156	0.0428*
	(0.0128)	(0.0139)	(0.0051)	(0.0139)	(0.0156)	(00178)	(0.0131)	0.0304***
Unpaid Worker	0.0002	0.0189*	-0.0102	0.0207*	-0.0030	0.0503*	-0.0055	(0.0157)
	(0.0056)	(0.0050)	(0.0116)	(0.0050)	(0.0058)	(0.0072)	(0.0052)	(0.0062)
Others	0.0087**	-0.0139**	0.0049	-0.0202*	0.0042	-0.0342*	0.0024	-0.0340*
	(0.0040)	(0.0041)	(0.0036)	(0.0040)	(0.0055)	(0.0071)	(0.0050)	(0.0065)
Income (Rp.)								
Household Income	0.0082*	-0.0042**	0.0044**	0.0007	00198*	-0.0167*	0.0134*	0.0006
	(0.0021)	(0.0017)	(0.0014)	(0.0011)	(0.0052)	(0.0041)	(0.0028)	(0.0052)
Square of Household	-0.0002**	0.0002**	-0.0001**	0.00001	0.0011	0.0009**	-0.0007*	-0.0014
Income	(0.0001)	(0.0001)	(0.00003)	(0.00002)	(0.0014)	(0.0003)	(0.0002)	(0.0011)
Household Characteristics								
Birth Order	-0.0357*	0.0285*	-0.0319*	0.0290*	-0.0766*	0.0974*	-0.0503*	0.0496*
	(0.0040)	(0.0035)	(0.0040)	(0.0037)	(0.0039)	(0.0042)	(0.0034)	(0.0034)
Child Aged 0-5 years	0.0304*	-0.0252*	0.0275*	-0.0287*	0.0635*	-0.0843*	0.0449*	-0.0454*
	(0.0044)	(0.0039)	(0.0041)	(0.0042)	(0.0042)	(0.0047)	(0.0036)	(0.0038)
Child Aged 6-9 years	0.0297*	-0.0211*	0.0271*	-0.0214*	0.0651*	-0.0869*	0.0413*	-0.0405*
	(0.0044)	(0.0039)	(0.0043)	(0.0040)	(0.0043)	(0.0048)	(0.0037)	(0.0039)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Aged 10-14 years	0.0106**	-0.0118*	0.0137*	-0.0154*	0.0301*	-0.0433*	0.0194*	-0.0202*
	(0.0035)	(0.0030)	(0.0034)	(0.0031)	(0.0034)	(0.0036)	(0.0029)	(0.0028)
Child Aged 15-17 years	-0.0054**	0.0004	0.0002	-0.0022	-0.0084*	-0.0049***	-0.0035***	-0.0018
	(0.0021)	(0.0021)	(0.0019)	(0.0020)	(0.0023)	(0.0027)	(0.0019)	(0.0022)
Number of Adults	-0.0036**	-0.0008	-0.0002	-0.0025**	-0.0033**	-0.0087*	-0.0023**	0.0034**
	(0.0013)	(0.0012)	(0.0012)	(0.0013)	(0.0014)	(0.0017)	(0.0011)	(0.0014)
Province								
NAD	0.0433**	-0.0154	0.0109	-0.0275**	0.0866*	-0.0698*	0.0876*	-0.0798*
	(0.0164)	(0.0160)	(0.0134)	(0.0138)	(0.0103)	(0.0121)	(0.0089)	(0.0103)
North Sumatera	0.0244***	0.0111	0.0201***	-0.0052	0.0508*	0.0607*	0.0625*	0.0205**
	(0.0128)	(0.0136)	(0.0115)	(0.0101)	(0.0085)	(0.0092)	(0.0064)	(0.0065)
West Sumatera	0.0204	0.0105	0.0067	-0.0218***	0.0194**	-0.0356**	0.0458*	-0.0053*
	(0.0143)	(0.0141)	(0.0121)	(0.0114)	(0.0091)	(0.0117)	(0.0075)	(0.0089)
Riau	0.0075	0.0024	0.0116	-0.0123	0.0589*	-0.0413**	0.0523*	-0.0701*
	(0.0142)	(0.0156)	(0.0130)	(0.0124)	(0.0111)	(0.0137)	(0.0083)	(0.0119)
Jambi	0.0057	0.0013	0.0012	-0.0220	0.0244**	-0.0703*	0.0460*	-0.0984*
	(0.0148)	(0.0156)	(0.0137)	(0.0143)	(0.0103)	(0.0145)	(0.0085)	(0.0141)
South Sumatera	0.0144	0.0066	0.0265***	-0.0252**	0.0209**	-0.0549*	0.0616*	-0.0655*
	(0.0138)	(0.0147)	(0.0137)	(0.0123)	(0.0092)	(0.0120)	(0.0081)	(0.0095)
Bengkulu	0.0170	0.0076	0.0238*	-0.0182	0.0288**	-0.0576*	0.0727*	-0.1015*
	(0.0165)	(0.0156)	(0.0157)	(0.0141)	(0.0107)	(0.0135)	(0.0099)	(0.0130)
Lampung	0.0022	0.0053	0.0137	-0.0078	0.0202**	0.0219**	0.0648*	-0.0460*
	(0.0147)	(0.0154)	(0.0134)	(0.0123)	(0.0095)	(0.0111)	(0.0092)	(0.0098
Bangka-Belitung	-0.0007	0.0175	0.0081	-0.0200	-0.0084	0.0670*	0.0403*	-0.0210
	(0.0146)	(0.0155)	(0.0144)	(0.0167)	(0.0126)	(0.0151)	(0.0113)	(0.0140)
Riau Islands	0.0283***	-0.0064	0.0251***	-0.0076	0.0557**	-0.0084	0.4503*	-0.0687**
	(0.0164)	(0.0165)	(0.0149)	(0.0126)	(0.0185)	(0.0228)	(0.0140)	(0.0259)
DKI Jakarta	0.0258***	-0.0142	0.0029	-0.0205***	-	-	-	-
	(0.0135)	(0.0151)	(0.0115)	(0.0112)				
West Java	0.0110	-0.0111	0.0085	-0.0179***	0.0118	-0.0796*	0.0294*	-0.0631*
	(0.0123)	(0.0140)	(0.0110)	(0.0103)	(0.0084)	(0.0123)	(0.0063)	(0.0093)
Central Java	0.0189	-0.0122	0.0136	-0.0207**	0.0248**	-0.0594*	0.0546*	-0.0550*
	(0.0126)	(0.0139)	(0.0112)	(0.0105)	(0.0082)	(0.0107)	(0.0066)	(0.0081)
DIY	0.0093	0.0015	0.0066	-0.0007	0.0517**	-0.0368	0.0814**	-0.0340***
	(0.0191)	(0.0176)	(0.0159)	(0.0130)	(0.0230)	(0.0240)	(0.0241)	(0.0180)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
East Java	0.0262**	-0.0105	0.0189***	-0.0236**	0.0566*	-0.0286**	0.0502*	-0.0539*
	(0.0128)	(0.0139)	(0.0113)	(0.0105)	(0.0086)	(0.0102)	(0.0063)	(0.0078)
Banten	0.0257***	-0.0172	0.0029	-0.0146	0.0194***	-0.1168*	0.0333*	-0.0858*
	(0.0144)	(0.0169)	(0.0124)	(0.0125)	(0.0108)	(0.0204)	(0.0086)	(0.0163)
Bali	0.0211	0.0049	0.0122	0.0243**	0.0385**	0.0686*	0.0325*	0.0393*
	(0.0154)	(0.0150)	(0.0132)	(0.0108)	(0.0139)	(0.0133)	(0.0093)	(0.0092)
West Nusa Tenggara	0.0249***	-0.0023	0.0095	0.0086	0.0479*	0.0120	0.0682*	-0.0169***
	(0.0151)	(0.0153)	(0.0126)	(0.0112)	(0.0119)	(0.0130)	(0.0102)	(0.0101)
East Nusa Tenggara	0.0170	-0.0048	0.0138	-0.0038	0.0262**	-0.0015	0.0356*	-0.0167**
	(0.0151)	(0.0160)	(0.0135)	(0.0114)	(0.0081)	(0.0097)	(0.0060)	(0.0071)
West Kalimantan	0.0112	0.0022	0.0147	-0.0199	0.0395*	-0.0536*	0.0554*	-0.0535*
	(0.0142)	(0.0156)	(0.0132)	(0.0139)	(0.0092)	(0.0116)	(0.0073)	(0.0087)
Central Kalimantan	0.0196	0.0221	0.0131	0.0045	0.0474*	-0.0084	0.0645*	-0.0445*
	(0.0149)	(0.0145)	(0.0134)	(0.0115)	(0.0098)	(0.0113)	(0.0083)	(0.0092)
South Kalimantan	-0.0080	0.0005	-0.0052	-0.0079	0.0025	-0.0437**	0.0315*	-0.0302**
	(0.0137)	(0.0155)	(0.0121)	(0.0121)	(0.0096)	(0.0126)	(0.0074)	(0.0090)
East Kalimantan	0.0170	-0.0115	0.0098	-0.0229***	0.0396**	-0.0053*	0.0708*	-0.0875*
	(0.0137)	(0.0156)	(0.0122)	(0.0125)	(0.0119)	(0.0148)	(0.0106)	(0.0153)
North Sulawesi	-0.0046	0.0214	0.0050	-0.0039	-0.0102	0.0199	0.0321*	-0.0469*
	(0.0144)	(0.0153)	(0.0138)	(0.0121)	(0.0101)	(0.0131)	(0.0085)	(0.0123)
Central Sulawesi	0.0120	0.0277***	0.0115	0.0016	0.0077	0.0501*	0.0369*	-0.0305**
	(0.0166)	(0.0152)	(0.0149)	(0.0124)	(0.0094)	(0.0111)	(0.0078)	(0.0093)
South Sulawesi	-0.0077	0.0227	0.0062	0.0003	-0.0067	0.0779*	0.0374*	-0.0157**
	(0.0127)	(0.0140)	(0.0119)	(0.0107)	(0.0078)	(0.0094)	(0.0062)	(0.0074)
Southeast Sulawesi	-0.0045	0.0128	-0.0072	0.0001	0.0284**	0.0888*	0.0440*	0.0058
	(0.0146)	(0.0151)	(0.0131)	(0.0118)	(0.0093)	(0.0100)	(0.0076)	(0.0078)
Gorontalo	-0.0020	0.0069	0.0134	-0.0244	-0.0380*	0.0445**	0.0302**	-0.0050
	(0.0154)	(0.0181)	(0.0158)	(0.0173)	(0.0101)	(0.0132)	(0.0088)	(0.0107)
West Sulawesi	-0.0250	0.0035	-0.0279***	-0.2363*	0.0215***	0.0377**	0.0481*	-0.0183
	(0.0160)	(0.0170)	(0.0146)	(0.0150)	(0.0112)	(0.0128)	(0.0100)	(0.0111)
Maluku	0.0229	0.0304**	0.0210	-0.0114	0.0653*	-0.0196	0.0662*	-0.0156
	(0.0187)	(0.0154)	(0.0177)	(0.0145)	(0.0124)	(0.0136)	(0.0098)	(0.0095)
North Maluku	0.0354	0.0287***	0.0132	0.0159	0.0585*	-0.0177	0.0764*	-0.0353**
	(0.0230)	(0.0155)	(0.0184)	(0.0123)	(0.0124)	(0.0136)	(0.0112)	(0.0109)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
West Papua	0.0450	0.0062	-0.0037	-0.0265	0.0430**	-0.0756*	0.0109	-0.0532*
	(0.0276)	(0.0193)	(0.0153)	(0.0197)	(0.0146)	(0.0197)	(0.0093)	(0.0137)
ρ	-0.6117*		-0.6989*		-0.6394*		-0.6112*	
	(0.0252)		(0.0261)		(0.0107)		(0.0151)	
Wald Test Chi^2	1253.5*		8586.1*		4695.5*		8867.2*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	313.4*		288.2*		1744.9*		871.7*	
Log-likelihood	-4031.784		-3090.458		-17902.231		-10912.791	
Number of Observations	18,150		16,495		37,299		32,265	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Child Characteristics										
Girls	0.0770	-0.0899*	-	-	-	-	0.0266*	-0.0182*	0.1106*	-0.1407*
	(0.0062)	(0.0034)					(0.0049)	(0.0045)	(0.0048)	(0.0047)
Biological Child	0.0924*	-0.1633*	0.0558*	-0.0989*	0.1056*	-0.1872*	0.1197*	-0.1913*	0.0458*	-0.0944*
	(0.0062)	(0.0059)	(0.0092)	(0.0089)	(0.0078)	(0.0071)	(0.0073)	(0.0063	(0.0091)	(0.0090)
Household Head's Characteristics										
Age	0.0012*	-0.0013*	0.0005	-0.0008**	0.0019*	-0.0019*	0.0019*	-0.0019*	0.0007**	-0.0008**
	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Female Headed	-0.0002	-0.0864	0.0157	-0.0117	-0.0123	-0.2503*	0.1115	-0.1078	-0.1067	-0.0540
	(0.0584)	(0.0699)	(0.0755)	(0.0833)	(0.0889)	(0.0450)	(0.0957)	(0.1023)	(0.0831)	(0.0911)
Household Head's Education										
Completed Primary	0.0464*	-0.0433*	0.0410*	-0.0410*	0.0558*	-0.0474*	0.0476**	-0.0511*	0.0462*	-0.0404*
	(0.0076)	(0.0076)	(0.0103)	(0.0101)	(0.0110)	(0.0110)	(0.0144)	(0.0138)	(0.0095)	(0.0094)
Junior Secondary	0.1391*	-0.1103*	0.1424*	-0.1127*	0.1331*	-0.1013*	0.1034*	-0.0972*	0.1578*	-0.1171*
	(0.0089)	(0.0088)	(0.0121)	(0.0118)	(0.0128)	(0.0127)	(0.0155)	(0.0149)	(0.0114)	(0.0113)
Senior Secondary	0.1869*	-0.1519*	0.2110*	-0.1746*	0.1568*	-0.1189*	0.1562*	-0.1287*	0.1963*	-0.1630*
	(0.0094)	(0.0093)	(0.0129)	(0.0127)	(0.0133)	(0.0131)	(0.0157)	(0.0151)	(0.0126)	(0.0123)
Tertiary Education	0.21678	-0.1321*	0.2740*	-0.2094*	0.1715*	-0.0786*	0.0172*	-0.1135*	0.2598*	-0.1853*
	(0.0135)	(0.0118)	(0.0202)	(0.0178)	(0.0179)	(0.0157)	(0.0184)	(0.0164)	(0.0218)	(0.0192)
Household Head's Employment										
Employer	0.0213*	0.0490*	0.0266**	0.0612*	0.0226**	0.0133***	0.0334*	0.0501*	0.0321*	0.0305*
	(0.0059)	(0.0059)	(0.0083)	(0.0080)	(0.0081)	(0.0080)	(0.0084)	(0.0077)	(0.0083)	(0.0082)
Employee	-0.0145**	0.0025	-0.0240**	0.0194**	-0.0035	-0.0173**	0.0005	-0.0057	-0.0249**	0.0189**
	(0.0054)	(0.0054)	(0.0076)	(0.0075)	(0.0074)	(0.0074)	(0.0064)	(0.0062)	(0.0081)	(0.0081)
Casual Worker	-0.0194	0.0228	-0.0307	0.0261	-0.0036	0.0197	-0.0262	0.0103	-0.0042	0.0256
	(0.0147)	(0.0148)	(0.0204)	(0.0210)	(0.0212)	(0.0202)	(0.0182)	(0.0177)	(0.0210)	(0.0216)
Unpaid Worker	0.0308***	0.0342**	0.0418***	0.0474**	0.0231	0.0022	0.0001	-0.0079	0.0575**	0.0317
	(0.0175)	(0.0162)	(0.0241)	(0.0223)	(0.0241)	(0.0226)	(0.0273)	(0.0261)	(0.0228)	(0.0216)
Others	-0.0280**	0.0347**	-0.0304**	0.0323**	-0.0201	0.0300**	-0.0126	0.0156	-0.0381**	0.0432**
	(0.0101)	(0.0104)	(0.0144)	(0.0145)	(0.0137)	(0.0138)	(0.0117)	(0.0116)	(0.0158)	(0.0162)

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics										
Spouse's Education										
Completed Primary	0.0704*	-0.0557*	0.0707*	-0.0595*	0.0683*	-0.0468*	0.0610*	-0.0405*	0.0769*	-0.0616*
	(0.0064)	(0.0064)	(0.0087)	(0.0085)	(0.0092)	(0.0092)	(0.0114)	(0.0111)	(0.0081)	(0.0081)
Junior Secondary	0.1645*	-0.1201*	0.1644*	-0.1250*	0.1583*	-0.1011*	0.1238*	-0.0927*	0.1886*	-0.1280*
	(0.0082)	(0.0080)	(0.0112)	(0.0110)	(0.0115)	(0.0114)	(0.0129)	(0.0126)	(0.0109)	(0.0107)
Senior Secondary	0.2160*	-0.1519*	0.2220*	-0.1671*	0.2019*	-0.1224*	0.1638*	-0.1145*	0.2520*	-0.1666*
	0.0094)	(0.0090)	(0.0131)	(0.0125)	(0.0132)	(0.0124)	(0.0137)	(0.0131)	(0.0137)	(0.0128)
Tertiary Education	0.2352*	-0.1351*	0.2920*	-0.2104*	0.2092*	-0.1026*	0.1857*	-0.1005*	0.2974*	-0.2033*
	(0.0150)	(0.0128)	(0.0244)	(0.0206)	(0.0188)	(0.0159)	(0.0178)	(0.0151)	(0.0267)	(0.0234)
Spouse's Employment										
Employer	-0.0023	0.1342*	0.0242**	0.0973*	-0.0272**	0.1580*	0.0022	0.1292*	0.0018	0.1145*
	(0.0084)	(0.0080)	(0.0117)	(0.0113)	(0.0116)	(0.0107)	(0.0110)	(0.0098)	(0.0119)	(0.0117)
Employee	-0.0535*	0.0321*	-0.0441*	0.0152	-0.0638*	0.0456*	-0.0374*	0.0306**	-0.0636*	0.0309**
	(0.0085)	(0.0084)	(0.0121)	(0.0119)	(0.0117)	(0.0112)	(0.0096)	(0.0092)	(0.0132)	(0.0132)
Casual Worker	-0.0724**	0.0634**	-0.1021**	0.0868**	-0.0348	0.0261	-0.0019	0.0420	-0.1129*	0.0670**
	(0.0212)	(0.0210)	(0.0295)	(0.0294)	(0.0305)	(0.0278)	(0.0310)	(0.0287)	(0.0287)	(0.0289)
Unpaid Worker	-0.0220**	0.0915*	-0.0025	0.0760*	-0.0415*	0.1011*	-0.0068	0.0637*	-0.0214**	0.0769*
	(0.0075)	(0.0073)	(0.0103)	(0.0100)	(0.0108)	(0.0102)	(0.0111)	(0.0102)	(0.0106)	(0.0105)
Others	-0.0003	-0.0401*	0.0128	-0.0417*	-0.0142	-0.0506*	0.0055	-0.0105	0.0015	-0.0771*
	(0.0067)	(0.0067)	(0.0093)	(0.0091)	(0.0096)	(0.0093)	(0.0079)	(0.0076)	(0.0101)	(0.0101)
Income (Rp.)										
Household Income	0.0396*	-0.0142*	0.0560*	-0.0317*	0.0255*	-0.0040	0.0275*	-0.0041***	0.0642*	-0.0436*
	(0.0031)	(0.0033)	(0.0047)	(0.0045)	(0.0035)	(0.0038)	(0.0030)	(0.0025)	(0.0055)	(0.0055)
Square of HH Income	-0.0012*	0.0009*	-0.0017*	0.0012*	-0.0006*	0.0006**	-0.0008*	0.0004**	-0.0029*	0.0032*
	(0.0002)	(0.0002)	(0.0004)	(0.0003)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0006)	(0.0005)
Household Characteristics										
Birth Order	-0.1399*	0.1159*	-0.1605*	0.1418*	-0.1104*	0.0787*	-0.0906*	0.0672*	-0.1706*	0.1461*
	(0.0077)	(0.0072)	(0.0108)	(0.0100)	(0.0107)	(0.0098)	(0.0104)	(0.0091)	(0.0106)	(0.0100)
Child Aged 0-5 years	0.0955*	-0.0785*	0.1103*	-0.1057*	0.0768*	-0.0448*	0.0478*	-0.0347*	0.1273*	-0.1089*
	(0.0082)	(0.0077)	(0.0115)	(0.0107)	(0.0114)	(0.0104)	(0.0111)	(0.0098)	(0.0112)	(0.0107)
Child Aged 6-9 years	0.1163*	-0.0965*	0.1336*	-0.1169*	0.0919*	-0.0671*	0.0679*	-0.0433*	0.1475*	-0.1312*
	(0.0083)	(0.0077)	(0.0115)	(0.0108)	(0.0116)	(0.0106)	(0.0113)	(0.0099)	(0.0113)	(0.0107)

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Household Characteristics										
Child Aged 10-14 years	0.1132*	-0.0960*	0.1278*	-0.1181*	0.0913*	-0.0621*	0.0669*	-0.0541*	0.1411)	-0.1223*
	(0.0081)	(0.0076)	(0.0113)	(0.0105)	(0.0112)	(0.0103)	(0.0110)	(0.0096)	(0.0111)	(0.0106)
Child Aged 15-17 years	0.0610*	-0.0526*	0.0704*	-0.0660*	0.0475*	-0.0340*	0.0354*	-0.0267*	0.0771*	-0.0689*
	(0.0057)	(0.0053)	(0.0081)	(0.0075)	(0.0075)	(0.0067)	(0.0077)	(0.0065)	(0.0078)	(0.0074)
Number of Adults	-0.0036**	-0.0166*	-0.0083**	-0.0160*	0.0003	-0.0127*	-0.0033	-0.0139*	-0.0058**	-0.0160*
	(0.0017)	(0.0017)	(0.0025)	(0.0024)	(0.0023)	(0.0024)	(0.0023)	(0.0022)	(0.0024)	(0.0024)
Rural	-0.0557*	0.0531*	-0.0716*	0.0723*	-0.0355*	0.0271*	-	-	-	-
	(0.0044)	(0.0043)	(0.0061)	(0.0059)	(0.0061)	(0.0059)				
Province										
NAD	0.1249*	-0.0939*	0.0865*	-0.0752*	0.1596*	-0.1125*	0.1011**	-0.0473	0.1456*	-0.1238*
	(0.0155)	(0.0146)	(0.0224)	(0.0212)	(0.0204)	(0.0192)	(0.0312)	(0.0291)	(0.0190)	(0.0181)
North Sumatera	0.0393**	0.0554*	0.0120	0.0548**	0.0635*	0.0508**	0.0046	0.0358	0.0727*	0.0675*
	(0.0142)	(0.0130)	(0.0207)	(0.0192)	(0.0182)	(0.0165	(0.0265)	(0.0249)	(0.0178)	(0.0166)
West Sumatera	-0.0103	-0.0253***	-0.0571*	0.0019	0.0363***	-0.0573**	0.0104	0.0242	-0.0148	-0.0521**
	(0.0154)	(0.0147)	(0.0222)	(0.0213)	(0.0201)	(0.0191)	(0.0285)	(0.0264)	(0.0194)	(0.0189)
Riau	0.0383**	-0.0239	-0.0148	0.0235	0.0925*	-0.0872*	0.0432	0.0314	0.0414***	-0.0497**
	(0.0168)	(0.0159)	(0.0239)	(0.0225)	(0.0229)	(0.0228)	(0.0309)	(0.0283)	(0.0211)	(0.0203)
Jambi	-0.0475**	-0.0363**	-0.1221*	-0.0014	0.0418***	-0.0837*	-0.0561***	0.0692**	-0.0415***	-0.0869*
	(0.0171)	(0.0164)	(0.0243)	(0.0230)	(0.0234)	(0.0225)	(0.0314)	(0.0283)	(0.0213)	(0.0208)
South Sumatera	-0.0393**	0.0011	-0.1076*	0.0240	0.0391***	-0.0280	-0.0113	0.0400	-0.0440**	-0.0204
	(0.0156)	(0.0149)	(0.0223)	(0.0215)	(0.0208)	(0.0197)	(0.0286)	(0.0269)	(0.0196)	(0.0190)
Bengkulu	0.0163	-0.0436**	-0.0478***	-0.0163	0.0900*	-0.0790*	-0.0042	0.0337	0.0325	-0.0805*
	(0.0175)	(0.0167)	(0.0248)	(0.0237)	(0.0241)	(0.0224)	(0.0341)	(0.0307)	(0.0214)	(0.0208)
Lampung	-0.0531**	0.0639*	-0.1179*	0.0963*	0.0330	0.0030	-0.0371	0.0721**	-0.0481**	0.0513**
	(0.0164)	(0.0155)	(0.0232)	(0.0219)	(0.0227)	(0.0214)	(0.0299)	(0.0278)	(0.0205)	(0.0198)
Bangka-Belitung	-0.1204*	0.1357*	-01831*	0.1699*	-0.0496***	0.0931*	-0.0735**	0.0970**	-0.1432*	0.1665*
	(0.0198)	(0.0187)	(0.0282)	(0.0263)	(0.0268)	(0.0252)	(0.0313)	(0.0295)	(0.0270)	(0.0262)
Riau Islands	0.0103	-0.0091	-0.0073	0.0051	0.0246	-0.0238	0.0079	0.0238	0.0380	-0.0290
	(0.0227)	(0.0212)	(0.0316)	(0.0296)	(0.0303)	(0.0285)	(0.0314)	(0.0287)	(0.0346)	(0.0347)
DKI Jakarta	-0.1420*	0.0744*	-0.1116*	-0.0238	-0.1251*	0.1007*	-0.0862**	0.0635**	-	-
	(0.0182)	(0.0176)	(0.0280)	(0.0284)	(0.0219)	(0.0205)	(0.0269)	(0.0252)		
West Java	-0.1208*	-0.0216	-0.1385*	-0.0637**	-0.0981*	0.0216	-0.0674**	0.0327	-0.1505*	-0.0791*
	(0.0141)	(0.0138)	(0.0204)	(0.0202)	(0.0180)	(0.0173)	(0.0260)	(0.0246)	(0.0184)	(0.0185)

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Central Java	-0.0539*	-0.0305**	-0.0946*	-0.0406**	-0.0088	-0.0218	-0.0278	0.0265	-0.0599**	-0.0783*
	(0.0140)	(0.0134)	(0.0202)	(0.0195)	(0.0180)	(0.0173)	(0.0261)	(0.0247)	(0.0179)	(0.0174)
DIY	0.0125	0.0541**	0.0164	0.0436	-0.0033	0.0597**	0.0285	0.0307	0.0131	0.0674**
	(0.0264)	(0.0230)	(0.0373)	(0.0322)	(0.0344)	(0.0300)	(0.0387)	(0.0342)	(0.0360)	(0.0322)
East Java	0.0003	-0.0186	-0.0122	-0.0190	0.0112	-0.0253	0.0195	0.0197	-0.0016	-0.0458**
	(0.0142)	(0.0134)	(0.0204)	(0.0195)	(0.0182)	(0.0173)	(0.0264)	(0.0249)	(0.0179)	(0.0172)
Banten	-0.0791*	-0.0713*	-0.1007*	-0.1118*	-0.0527**	-0.0277	-0.0268	0.0056	-0.1051*	-0.1345*
	(0.0167)	(0.0180)	(0.0240)	(0.0260)	(0.0217)	(0.0228)	(0.0286)	(0.0278)	(0.0225)	(0.0250)
Bali	-0.0255	0.1331*	0.0103	0.0944*	-0.0623**	0.1634*	-0.0028	0.1239*	-0.0339	0.1398*
	(0.0191)	(0.0172)	(0.0279)	(0.0250)	(0.0240)	(0.0217)	(0.0315)	(0.0276)	(0.0252)	(0.0237)
West Nusa Tenggara	0.0302***	0.0353**	0.0072	0.0130	0.0556**	0.0532**	0.0467	0.0282	0.0296	0.0401**
	(0.0175)	(0.0164)	(0.0252)	(0.0240)	(0.0228)	(0.0208)	(0.0304)	(0.0278)	(0.0227)	(0.0220)
East Nusa Tenggara	-0.0309**	0.0283**	-0.0818*	0.0473**	0.0220	0.0053	0.1094**	-0.0681**	-0.0619**	0.0532**
	(0.0152)	(0.0144)	(0.0218)	(0.0209)	(0.0200)	(0.0189)	(0.0320)	(0.0300)	(0.0186)	(0.0180)
West Kalimantan	-0.0417**	0.0385**	-0.0846*	0.0557**	0.0053	0.0147	-0.0447	0.0252	-0.0370***	0.0436**
	(0.0158)	(0.0148)	(0.0227)	(0.0213)	(0.0207)	(0.0194)	(0.0302)	(0.0290)	(0.0194)	(0.0185)
Central Kalimantan	-0.0291***	0.0595*	-0.0795*	0.0851*	0.0259	0.0237	-0.0074	0.0603**	-0.0336***	0.0589**
	(0.0158)	(0.0149)	(0.0227)	(0.0217)	(0.0210)	(0.0195)	(0.0305)	(0.0279)	(0.0195)	(0.0189)
South Kalimantan	-0.0947*	0.0572*	-0.1249*	0.0681**	-0.0653**	0.0392***	-0.0327	0.0602**	-0.1170*	0.0574**
	(0.0161)	(0.0155)	(0.0228)	(0.0222)	(0.0215)	(0.0204)	(0.0298)	(0.0281)	(0.0203)	(0.0197)
East Kalimantan	0.0233	-0.0869*	-0.0357	-0.0658**	0.0867*	-0.1056*	0.0297	-0.0403	0.0306	-0.1166*
	(0.0174)	(0.0171)	(0.0247)	(0.0240)	(0.0237)	(0.0233)	(0.0289)	(0.0276)	(0.0233)	(0.0232)
North Sulawesi	-0.0817*	0.0306***	-0.1657*	0.0993*	0.0247	-0.0988*	-0.0572***	0.0449	-0.0878*	0.0185
	(0.0176)	(0.0167)	(0.0246)	(0.0233)	(0.0251)	(0.0263)	(0.0313)	(0.0296)	(0.0223)	(0.0214)
Central Sulawesi	-0.0809*	0.0967*	-0.1637*	0.1749*	0.0239	-0.0216	-0.0147	0.0539***	-0.0979*	0.1077*
	(0.0171)	(0.0161)	(0.0239)	(0.0229)	(0.0243)	(0.0233)	(0.0358)	(0.0315)	(0.0208)	(0.0201)
South Sulawesi	-0.0361**	0.0751*	-0.0934*	0.1255*	0.0289	0.0003	-0.0243	0.0466***	-0.0372**	0.0904*
	(0.0146)	(0.0136)	(0.0208)	(0.0197)	(0.0195)	(0.0182)	(0.0282)	(0.0263)	(0.0179)	(0.0170)
Southeast Sulawesi	0.0078	0.0890*	-0.0512**	0.1445*	0.0800**	0.0039	-0.0269	0.0386	0.0236	0.1026*
	(0.0165)	(0.0149)	(0.0231)	(0.0213)	(0.0231)	(0.0205)	(0.0322)	(0.0294)	(0.0200)	(0.0187)
Gorontalo	-0.1048*	0.0618**	-0.1918*	0.1165*	-0.0086	-0.0047	-0.0467	0.0329	-0.1218*	0.0681**
	(0.0188)	(0.0179)	(0.0272)	(0.0255)	(0.0252)	(0.0246)	(0.0356)	(0.0337)	(0.0233)	(0.0226)
West Sulawesi	-0.0511**	0.0667*	-0.1371*	0.1368*	0.0585**	-0.0371	-0.0233	0.0202	-0.0570**	0.0786**
	(0.0203)	(0.0189)	(0.0284)	(0.0265)	(0.0295)	(0.0280)	(0.0429)	(0.0358)	(0.0245)	(0.0238)

Table 4-17: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years, SUSENAS 2007 (*continued*).

Variables	All		Gender				Region			
			Boys		Girls		Urban		Rural	
	School	Work	School	Work	School	Work	School	Work	School	Work
Maluku	0.1149*	-0.0603**	0.0925**	-0.0446***	0.1272*	-0.0719**	0.1550*	-0.0676**	0.1155*	-0.0653**
	(0.0197)	(0.0180)	(0.0275)	(0.0254)	(0.0268)	(0.0245)	(0.0391)	(0.0327)	(0.0243)	(0.0229)
North Maluku	0.0730*	-0.0129	0.0029	0.0149	0.1581*	-0.0421***	0.0396	0.0321	0.0887*	-0.0290
	(0.0192)	(0.0179)	(0.0270)	(0.0256)	(0.0278)	(0.0240)	(0.0356)	(0.0314)	(0.0238)	(0.0229)
West Papua	-0.0317	-0.0032	-0.0326	-0.0063	-0.0302	-0.0017	0.0129	-0.0829***	-0.0427	0.0190
	(0.0235)	(0.0211)	(0.0360)	(0.0308)	(0.0279)	(0.0269)	(0.0404)	(0.0457)	(0.0298)	(0.0271)
ρ	-0.7470*		-0.7316*		-0.7682*		-0.7621*		-0.7433*	
	(0.0049)		(0.0065)		(0.0077)		(0.0091)		(0.0059)	
Wald Test Chi^2	13052.7*		7936.2*		5821.7*		4276.3*		8124.6*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	7575.8*		4499.8*		2889.9*		2121.7*		5348.7*	
Log-likelihood	-44891.235		--27319.869		-16878.162		-12768.885)		-31540.211	
Number of Observations	52,039		29,577		22,462		19,543		32,496	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Child Characteristics								
Biological Child	0.0745*	-0.1179*	0.1351*	-0.2191*	0.0329**	-0.0687*	0.0545*	-0.1125*
	(0.0114)	(0.0101)	(0.0093)	(0.0077)	(0.0128)	(0.0127)	(0.0122)	(0.0116)
Household Head's Characteristics								
Age	0.0016**	-0.0019*	0.0021*	-0.0017*	-0.0002	-0.0001	0.0018*	-0.0018*
	(0.0005)	(0.0004)	(0.0005)	(0.0004)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Female Headed	0.1055	-0.0737	0.8543*	-0.8475*	-0.1016	0.0519	-0.0841	-0.4226*
	(0.1072)	(0.1024)	(0.0342)	(0.0440)	(0.1142)	(0.1194)	(0.1153)	(0.0517)
Household Head's Education								
Completed Primary	0.0361***	-0.0515**	0.0719**	-0.0585**	0.0444*	-0.0394**	0.0495*	-0.0401**
	(0.0195)	(0.0176)	(0.0214)	(0.0212)	(0.0127)	(0.0128)	(0.0136)	(0.0135)
Junior Secondary	0.0958*	-0.0937*	0.1194*	-0.1042*	0.1698*	-0.1303*	0.1413*	-0.0967*
	(0.0209)	(0.0190)	(0.0230)	(0.0229)	(0.0155)	(0.0155)	(0.0164)	(0.0160)
Senior Secondary	0.1746*	-0.1522*	0.1404*	-0.0963*	0.2172*	-0.1844*	0.1696*	-0.1331*
	(0.0214)	(0.0196)	(0.0231)	(0.0228)	(0.0170)	(0.0170)	(0.0179)	(0.0171)
Tertiary Education	0.1985*	-0.1696*	0.1612*	-0.0698**	0.3173*	-0.2422*	0.1885*	-0.1277*
	(0.0271)	(0.0232)	(0.0259)	(0.0239)	(0.0300)	(0.0267)	(0.0303)	(0.0259)
Household Head's Employment								
Employer	0.0512*	0.0498*	0.0213***	0.0318**	0.0252**	0.0616*	0.0445*	-0.0229***
	(0.0120)	(0.0107)	(0.0117)	(0.0107)	(0.0112)	(0.0111)	(0.0119)	(0.0118)
Employee	-0.0021	0.0016	0.0045	-0.0165***	-0.0383**	0.0393*	-0.0071	-0.0069
	(0.0090)	(0.0086)	(0.0089)	(0.0087)	(0.0111)	(0.0110)	(0.0115)	(0.0116)
Casual Worker	-0.0350	0.0191	-0.0137	-0.0039	-0.0131	0.0214	0.0100	0.0294
	(0.0243)	(0.0237)	(0.0278)	(0.0267)	(0.0291)	(0.0304)	(0.0298)	(0.0285)
Unpaid Worker	0.0298	-0.0091	-0.0152	-0.0174	0.0488	0.0686**	0.0656**	-0.0220
	(0.0376)	(0.0353)	(0.0379)	(0.0370)	(0.0313)	(0.0298)	(0.0317)	(0.0298)
Others	-0.0203	0.0226	0.0062	-0.0050	-0.0316	0.0404***	-0.0447**	0.0435**
	(0.0163)	(0.0159)	(0.0166)	(0.0163)	(0.0219)	(0.0224)	(0.0216)	(0.0217)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Spouse's Characteristics								
Spouse's Education								
Completed Primary	0.0708*	-0.0440**	0.0428**	-0.0237	0.0755*	-0.0673*	0.0788*	-0.0549*
	(0.0152)	(0.0140)	(0.0173)	(0.0175)	(0.0109)	(0.0110)	(0.0115)	(0.0115)
Junior Secondary	0.1228*	-0.0883*	0.1171*	-0.0816*	0.1964*	-0.1445*	0.1736*	-0.1015*
	(0.0174)	(0.0161)	(0.0193)	(0.0196)	(0.0149)	(0.0148)	(0.0154)	(0.0149)
Senior Secondary	0.1746*	-0.1139*	0.1459*	-0.1018*	0.2560*	-0.1955*	0.2450*	-0.1271*
	(0.0185)	(0.0171)	(0.0203)	(0.0200)	(0.0186)	(0.0178)	(0.0197)	(0.0172)
Tertiary Education	0.2548*	-0.1497*	0.1533*	-0.0795*	0.2895*	-0.2341*	0.3117*	-0.1767*
	(0.0294)	(0.0228)	(0.0240)	(0.0214)	(0.0372)	(0.0335)	(0.0377)	(0.0305)
Spouse's Employment								
Employer	0.0306**	0.0897*	-0.0252	0.1611*	0.0179	0.0921*	-0.0162	0.1299*
	(0.0156)	(0.0137)	(0.0154)	(0.0137)	(0.0164)	(0.0162)	(0.0170)	(0.0157)
Employee	-0.0386**	0.0221***	-0.0413**	0.0402**	-0.0453**	0.0051	-0.0875*	0.0596**
	(0.0136)	(0.0130)	(0.0134)	(0.0127)	(0.0181)	(0.0182)	(0.0187)	(0.0178)
Casual Worker	-0.0168	0.0641***	0.0217	-0.0118	-0.1578*	0.0980**	-0.0621	0.0240
	(0.0403)	(0.0373)	(0.0509)	(0.0455)	(0.0405)	(0.0405)	(0.0401)	(0.0374)
Unpaid Worker	0.0030	0.0514*	-0.0217	0.0773*	-0.0074	0.0760*	-0.0410**	0.0796*
	(0.0151)	(0.0137)	(0.0160)	(0.0146)	(0.0142)	(0.0142)	(0.0156)	(0.0147)
Others	0.0196***	-0.0163	-0.0107	-0.0087	0.0080	-0.0642*	-0.0081	-0.1021*
	(0.0108)	(0.0103)	(0.0114)	(0.0111)	(0.0136)	(0.0136)	(0.0149)	(0.0144)
Income (Rp.)								
Household Income	0.0433*	-0.0182*	0.0161*	0.0028	0.0748*	-0.0498*	0.0508*	-0.0398*
	(0.0052)	(0.0043)	(0.0034)	(0.0030)	(0.0075)	(0.0075)	(0.0076)	(0.0088)
Square of Household	-0.0012*	0.0006**	-0.0003**	0.0002	-0.0033*	0.0028*	-0.0023**	0.0045*
Income	(0.0003)	(0.0002)	(0.0001)	(0.0001)	(0.0008)	(0.0007)	(0.0007)	(0.0011)
Household Characteristics								
Birth Order	-0.1042*	0.0707*	-0.0695*	0.0595*	-0.1915*	0.1819*	-0.1434*	0.0961*
	(0.0146)	(0.0127)	(0.0145)	(0.0126)	(0.0144)	(0.0138)	(0.0150)	(0.0139)
Child Aged 0-5 years	0.0607*	-0.0424**	0.0314**	-0.0298**	0.1382*	-0.1424*	0.1155*	-0.0650*
	(0.0156)	(0.0136)	(0.0155)	(0.0136)	(0.0154)	(0.0148)	(0.0159)	(0.0148)
Child Aged 6-9 years	0.0790*	-0.0429**	0.0508**	-0.0429**	0.1642*	-0.1601*	0.1263*	-0.0903*
	(0.0156)	(0.0138	(0.0159)	(0.0139)	(0.0154)	(0.0148)	(0.0161)	(0.0149)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Household Characteristics								
Child Aged 10-14 years	0.0741*	-0.0521*	0.0526**	-0.0514*	0.1563*	-0.1558*	0.1214*	-0.0747*
	(0.0154)	(0.0135)	(0.0152)	(0.0133)	(0.0151)	(0.0145)	(0.0157)	(0.0147)
Child Aged 15-17 years	0.0318**	-0.0226**	0.0344**	-0.0304*	0.0922*	-0.0902*	0.0581*	-0.0410*
	(0.0112)	(0.0095)	(0.0100)	(0.0085)	(0.0109)	(0.0104)	(0.0105)	(0.0097)
Number of Adults	-0.0105**	-0.0086**	0.0022	-0.0147*	-0.0078**	-0.0202*	-0.0038	-0.0086**
	(0.0033)	(0.0031)	(0.0031)	(0.0030)	(0.0033)	(0.0033)	(0.0034)	(0.0034)
Province								
NAD	0.1092**	-0.0572	0.1213**	-0.0664	0.0885**	-0.0909**	0.1940*	-0.1464*
	(0.0435)	(0.0398)	(0.0465)	(0.0420)	(0.0265)	(0.0262)	(0.0250)	(0.0234)
North Sumatera	0.0391	-0.0050	-0.0138	0.0529	0.0340	0.0768**	0.1039*	0.0543**
	(0.0379)	(0.0345)	(0.0372)	(0.0348)	(0.0249)	(0.0243)	(0.0233)	(0.0206)
West Sumatera	0.0536	-0.0047	-0.0182	0.0247	-0.0908**	-0.0038	0.0603**	-0.0996*
	(0.0408)	(0.0365)	(0.0398)	(0.0367)	(0.0270)	(0.0272)	(0.0258)	(0.0246)
Riau	0.0642	0.0013	0.0534	0.0332	-0.0332	0.0277	0.1144*	-0.1498*
	(0.0430)	(0.0384)	(0.0469)	(0.0405)	(0.0291)	(0.0287)	(0.0289)	(0.0297)
Jambi	-0.0070	0.0460	-0.0844***	0.0542	-0.1586*	-0.0257	0.1037*	-0.1585*
	(0.0447)	(0.0390)	(0.0437)	(0.0393)	(0.0295)	(0.0291)	(0.0295)	(0.0293)
South Sumatera	0.0210	-0.0033	-0.0193	0.0505	-0.1474*	0.0303	0.0710**	-0.0711**
	(0.0406)	(0.0370)	(0.0407)	(0.0379)	(0.0272)	(0.0273)	(0.0265)	(0.0247)
Bengkulu	0.0021	0.0245	0.0069	0.0153	-0.0564***	-0.0368	0.1294*	-0.1232*
	(0.0479)	(0.0427)	(0.0492)	(0.0422)	(0.0295)	(0.0292)	(0.0298)	(0.0278)
Lampung	-0.0135	0.0198	-0.0365	0.0899**	-0.1443*	0.1210*	0.0696**	-0.0460***
	(0.0426)	(0.0385)	(0.0425)	(0.0383)	(0.0280)	(0.0278)	(0.0292)	(0.0277)
Bangka-Belitung	-0.0038	0.0649	-0.0960**	0.1052**	-0.2428*	0.2272*	-0.0301	0.1023**
	(0.0451)	(0.0400)	(0.0435)	(0.0421)	(0.0369)	(0.0365)	(0.0385)	(0.0355)
Riau Islands	0.0937**	-0.0281	-0.0637	0.0544	-0.0635	0.0371	0.1575**	-0.1025**
	(0.0459)	(0.0396)	(0.0428)	(0.0396)	(0.0456)	(0.0465)	(0.0548)	(0.0519)
DKI Jakarta	0.0027	-0.0450	-0.1359*	0.1171**	-	-	-	-
	(0.0392)	(0.0361)	(0.0373)	(0.0344)				
West Java	-0.0055	-0.0490	-0.1103**	0.0879**	-0.1931*	-0.0935*	-0.1118*	-0.0378
	(0.0373)	(0.0344)	(0.0365)	(0.0340)	(0.0255)	(0.0264)	(0.0242)	(0.0237)

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Central Java	0.0188	-0.0346	-0.0567	0.0600***	-0.1307*	-0.0626**	0.0124	-0.0805*
	(0.0374)	(0.0344)	(0.0367)	(0.0342)	(0.0248)	(0.0249)	(0.0237)	(0.0228)
DIY	0.2031**	-0.0648	-0.0928***	0.0975**	-0.0457	0.0932**	0.0629	0.0398
	(0.0634)	(0.0515)	(0.0487)	(0.0444)	(0.0481)	(0.0432)	(0.0522)	(0.0445)
East Java	0.0903**	-0.0400	-0.0337	0.0487	-0.0434***	-0.0165	0.0311	-0.0729**
	(0.0378)	(0.0346)	(0.0369)	(0.0345)	(0.0247)	(0.0247)	(0.0238)	(0.0224)
Banten	0.0303	-0.0670***	-0.0640	0.0515	-0.1531*	-0.1590*	-0.0572***	-0.0892**
	(0.0408)	(0.0394)	(0.0399)	(0.0379)	(0.0314)	(0.0343)	(0.0296)	(0.0330)
Bali	0.1033**	0.0418	-0.0896**	0.1726*	-0.0169	0.1122**	-0.0570***	0.1653*
	(00459)	(0.0387)	(0.0429)	(0.0379)	(0.0358)	(0.0338)	(0.0318)	(0.0295)
West Nusa Tenggara	0.1132**	-0.0276	-0.0021	0.0575	-0.0231	0.0233	0.0828**	0.0623**
	(0.0441)	(0.0387)	(0.0420)	(0.0387)	(0.0316)	(0.0316)	(0.0305)	(0.0274)
East Nusa Tenggara	0.1454**	-0.0702***	0.0737***	-0.0764***	-0.1322*	0.0786**	0.0093	0.0295
	(0.0458)	(0.0408)	(0.0444)	(0.0422)	(0.0258)	(0.0259)	(0.0247)	(0.0230)
West Kalimantan	-0.0035	-0.0175	-0.0612	0.0286	-0.1024*	0.0794**	0.0299	0.0060
	(0.0428)	(0.0391)	(0.0429)	(0.0438)	(0.0271)	(0.0267)	(0.0255)	(0.0235)
Central Kalimantan	0.0176	0.0394	-0.0091	0.0460	-0.1073*	0.0991*	0.0431***	0.0145
	(0.0425)	(0.0379)	(0.0451)	(0.0407)	(0.0272)	(0.0273)	(0.0259)	(0.0240)
South Kalimantan	0.0190	0.0314	-0.0766***	0.0582	-0.1691*	0.0781**	-0.0687**	0.0392
	(0.0419)	(0.0385)	(0.0423)	(0.0397)	(0.0278)	(0.0280)	(0.0275)	(0.0256)
East Kalimantan	0.0547	-0.0893**	0.0245	-0.0040	-0.0562***	-0.0615***	0.1259*	-0.0841*
	(0.0411)	(0.0381)	(0.0414)	(0.0384)	(0.0319)	(0.0323)	(0.0329)	(0.0338)
North Sulawesi	-0.0354	0.0247	-0.0579	0.0247	-0.2088*	0.1265*	0.0629***	-0.1662*
	(0.0438)	(0.0399)	(0.0453)	(0.0431)	(0.0302)	(0.0298)	(0.0327)	(0.0354)
Central Sulawesi	0.0171	0.0668	-0.0497	0.0345	-0.2150*	0.2135*	0.0503***	-0.0410
	(0.0513)	(0.0412)	(0.0501)	(0.0467)	(0.0284)	(0.0287)	(0.0299)	(0.0284)
South Sulawesi	-0.0123	0.0378	-0.0063	-0.0039	-0.1136*	0.1607*	0.0416***	0.0051
	(0.0399)	(0.0360)	(0.0408)	(0.0379)	(0.0247)	(0.0246)	(0.0243)	(0.0225)
Southeast Sulawesi	-0.0135	0.0324	-0.0177	0.0032	-0.0606**	0.1845*	0.1184*	-0.0039
	(0.0452)	(0.0400)	(0.0469)	(0.0428)	(0.0272)	(0.0267)	(0.0284)	(0.0254)
Gorontalo	-0.0048	-0.0046	-0.0733	0.0554	-0.2526*	0.1584*	0.0247	-0.0312
	(0.0544)	(0.0482)	(0.0469)	(0.0445)	(0.0327)	(0.0322)	(0.0321)	(0.0312)
West Sulawesi	-0.0543	0.0508	0.0360	-0.0884	-0.1643*	0.1690*	0.0739**	0.0401
	(0.0606)	(0.0463)	(0.0647)	(0.0698)	(0.0332)	(0.0334)	(0.0359)	(0.0343)

Table 4-18: Marginal Effects of Bivariate Probit Estimation of Work and Schooling of Children Aged 15-17 years by Region and Gender, SUSENAS 2007 (*continued*).

Variables	Urban				Rural			
	Boys		Girls		Boys		Girls	
	School	Work	School	Work	School	Work	School	Work
Maluku	0.2479*	-0.0991**	0.0740	-0.0485	0.0614***	-0.0339	0.1584*	-0.0860**
	(0.0545)	(0.0436)	(0.0527)	(0.0471)	(0.0335)	(0.0324)	(0.0332)	(0.0306)
North Maluku	0.0341	0.0064	0.0775	0.0363	-0.0007	0.0156	0.1919*	-0.0679**
	(0.0490)	(0.0437)	(0.0565)	(0.0428)	(0.0326)	(0.0325)	(0.0341)	(0.0303)
West Papua	0.00568	-0.1295***	-0.0267	-0.0354	-0.0563	0.0259	-0.0300	0.0073
	(0.0654)	(0.0669)	(0.0497)	(0.0605)	(0.0434)	(0.0392)	(0.0361)	(0.0338)
ρ	-0.7245*		-0.8083*		-0.7383*		-0.7530*	
	(0.0133)		(0.0125)		(0.0074)		(0.0098)	
Wald Test Chi^2	2319.4*		4634.3*		4750.5*		3755.4*	
Likelihood ratio test: (ρ=0), $Chi^2(1)$	1076.2*		968.7*		3393.5*		1873.0*	
Log-likelihood	-7100.126		-5357.491		-20015.369		-11202.894	
Number of Observations	10,440		9,103		19,137		13,359	

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Robust standard errors are reported in brackets.

Appendix 4-A

Table 4-A1: Variable Names and Definitions

Variables	Definitions
Child Characteristics	
Age	Child's age in completed years
Girls	1 if the child is a girl, 0 otherwise
Son or daughter	1 if the child is a son or daughter to the household, 0 otherwise
Household Head's Characteristics	
Age	Household head's age in completed years
Female	1 if household head is female, 0 otherwise
Household Head's Education	
Not Completed Primary	1 if not completed primary, 0 otherwise (reference)
Completed Primary	1 if completed primary, 0 otherwise
Junior Secondary	1 if completed junior high school, 0 otherwise
Senior Secondary	1 if completed senior high school, 0 otherwise
Tertiary Education	1 if completed tertiary education, 0 otherwise
Household Head's Employment	
Self-Employed	1 if head of household is work as self-employed , 0 otherwise (reference)
Employer	1 if head of household is work as employer , 0 otherwise
Employee	1 if head of household is work as employee , 0 otherwise
Casual Worker	1 if head of household is work ascasual worker , 0 otherwise
	1 if head of household is work as unpaid worker , 0 otherwise
Unpaid Worker	1 if head of household is work as others , 0 otherwise
Others	
Household Head Spouse's Education	
Not Completed Primary	1 if not completed primary, 0 otherwise (reference)
Completed Primary	1 if completed primary, 0 otherwise
Junior Secondary	1 if completed junior high school, 0 otherwise
Senior Secondary	1 if completed senior high school, 0 otherwise
Tertiary Education	1 if completed tertiary education, 0 otherwise
Household Head Spouse's Employment	
Self-Employed	1 if spouse work as self-employed , 0 otherwise (reference)
Employer	1 if head of household is work as employer , 0 otherwise
Employee	1 if head of household is work as employee , 0 otherwise
Casual Worker	1 if head of household is work as casual worker , 0 otherwise
Unpaid Worker	1 if head of household is work as unpaid worker , 0 otherwise
Others	1 if head of household is work as others , 0 otherwise
Income (Rp.)	
Household Income	Household income (excluding children's earnings)
Square Root of Household Income	Square Root of Household Income
Household Characteristics	
Birth Order	Birth Order of the child in the household
Number of Children Aged Less Than 5 years	Number of children aged less than 5 years in the household
Number of Children Aged 6 to 9 years	Number of children aged 6 to 9 years in the household
Number of Children Aged 10 to 14 years	Number of children aged 10 to 14 years in the household

Table 4-A1: Variable Names and Definitions (*continued*)

Variables	Definitions
Number of Children Aged 15 to 17 years	Number of children aged 15 to 17 years in the household
Number of Adults (aged 18 years and above)	Number adults in the household
Land Ownership	
Privately Owned: Paddy	Size of farmed area of paddy in hectare which is privately owned by the household
Privately Owned: Dry Land (other crops than paddy)	Size of farmed area of dry land (other crops) in hectare which is privately owned by the household
Privately Owned but Managed by Others (both paddy and dry land)	Size of farmed area of paddy and dry land in hectare which is privately owned by the household but managed by others
Province	
NAD	1 if household resides in NAD, 0 otherwise
North Sumatera	1 if household resides in North Sumatera, 0 otherwise
West Sumatera	1 if household resides in West Sumatera, 0 otherwise
Riau	1 if household resides in Riau, 0 otherwise
Jambi	1 if household resides in Jambi, 0 otherwise
South Sumatera	1 if household resides in South Sumatera, 0 otherwise
Bengkulu	1 if household resides in Bengkulu, 0 otherwise
Lampung	1 if household resides in Lampung, 0 otherwise
Bangka-Belitung	1 if household resides in Bangka-Belitung, 0 otherwise
Riau Islands	1 if household resides in Riau Islands, 0 otherwise
DKI Jakarta	1 if household resides in DKI Jakarta, 0 otherwise
West Java	1 if household resides in West Java, 0 otherwise
Central Java	1 if household resides in Central Java, 0 otherwise
DIY	1 if household resides in DIY, 0 otherwise
East Java	1 if household resides in East Java, 0 otherwise
Banten	1 if household resides in Banten, 0 otherwise
Bali	1 if household resides in Bali, 0 otherwise
West Nusa Tenggara	1 if household resides in West Nusa Tenggara, 0 otherwise
East Nusa Tenggara	1 if household resides in East Nusa Tenggara, 0 otherwise
West Kalimantan	1 if household resides in West Kalimantan, 0 otherwise
Central Kalimantan	1 if household resides in Central Kalimantan, 0 otherwise
South Kalimantan	1 if household resides in South Kalimantan, 0 otherwise
East Kalimantan	1 if household resides in East Kalimantan, 0 otherwise
North Sulawesi	1 if household resides in North Sulawesi, 0 otherwise
Central Sulawesi	1 if household resides in Central Sulawesi, 0 otherwise
South Sulawesi	1 if household resides in South Sulawesi, 0 otherwise
Southeast Sulawesi	1 if household resides in Southeast Sulawesi, 0 otherwise
Gorontalo	1 if household resides in Gorontalo, 0 otherwise
West Sulawesi	1 if household resides in West Sulawesi, 0 otherwise
Maluku	1 if household resides in Maluku, 0 otherwise
North Maluku	1 if household resides in North Maluku, 0 otherwise
West Papua	1 if household resides in West Papua, 0 otherwise (reference in SUSENAS 2005)
Papua	1 if household resides in Papua, 0 otherwise (reference in SUSENAS 2007)

Table 4A-2: Descriptive Statistics, SUSENAS 2005.

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Activity					
Schooling	0.94	0.92	0.96	0.97	0.93
	(0.24)	(0.26)	(0.20)	(0.18)	(0.26)
Working	0.09	0.11	0.06	0.05	0.11
	(0.28)	(0.31)	(0.25)	(0.21)	(0.31)
Work and School	0.03	0.03	0.02	0.01	0.04
	(0.17)	(0.18)	(0.15)	(0.12)	(0.19)
Child Characteristics					
Age	13.16	13.19	13.12	13.28	13.09
	(2.26)	(2.28)	(2.24)	(2.30)	(2.24)
Female	0.47	-	-	0.49	0.47
	(0.50)			(0.50)	(0.50)
Biological child	0.94	0.94	0.93	0.93	0.94
	(0.24)	(0.23)	(0.25)	(0.25)	(0.23)
Household Head's Characteristics					
Age	45.01	45.06	44.96	45.00	45.01
	(8.75)	(8.76)	(8.74)	(8.20)	(9.05)
Female Headed	0.001	0.001	0.001	0.001	0.001
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Household Head's Education					
Not Completed Primary	0.06	0.06	0.06	0.02	0.08
	(0.24)	(0.24)	(0.23)	(0.15)	(0.27)
Completed Primary	0.49	0.50	0.48	0.34	0.58
	(0.50)	(0.50)	(0.50)	(0.47)	(0.49)
Junior Secondary	0.17	0.17	0.17	0.17	0.17
	(0.38)	(0.37)	(0.38)	(0.38)	(0.37)
Senior Secondary	0.21	0.20	0.21	0.33	0.14
	(0.40)	(0.40)	(0.41)	(0.47)	(0.34)
Tertiary Education	0.07	0.07	0.07	0.14	0.04
	(0.26)	(0.25)	(0.26)	(0.34)	(0.18)
Household Head's Employment					
Self-Employed	0.28	0.28	0.28	0.26	0.29
	(0.45)	(0.45)	(0.45)	(0.44)	(0.46)
Employer	0.33	0.34	0.32	0.16	0.42
	(0.47)	(0.47)	(0.47)	(0.37)	(0.49)
Employee	0.28	0.27	0.28	0.46	0.18
	(0.45)	(0.44)	(0.45)	(0.50)	(0.38)
Casual Worker	0.07	0.07	0.07	0.06	0.07
	(0.25)	(0.25)	(0.25)	(0.23)	(0.26)
Unpaid Worker	0.01	0.01	0.01	0.004	0.01
	(0.08)	(0.08)	(0.08)	(0.07)	(0.09)
Others	0.04	0.04	0.04	0.05	0.03
	(0.19)	(0.19)	(0.19)	(0.23)	(0.17)
Spouse's Characteristics					
Spouse's Education					
Not Completed Primary	0.09	0.09	0.08	0.04	0.11
	(0.28)	(0.29)	(0.28)	(0.19)	(0.32)
Completed Primary	0.54	0.54	0.53	0.39	0.62
	(0.50)	(0.50)	(0.50)	(0.49)	(0.49)
Junior Secondary	0.17	0.17	0.17	0.20	0.15
	(0.37)	(0.37)	(0.38)	(0.40)	(0.36)
Senior Secondary	0.16	0.15	0.16	0.28	0.09
	(0.36)	(0.36)	(0.37)	(0.45)	(0.29)
Tertiary Education	0.05	0.04	0.05	0.09	0.02
	(0.21)	(0.21)	(0.22)	(0.29)	(0.14)

Table 4A-2: Descriptive Statistics, SUSENAS 2005 (*continued*).

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Spouse's Employment					
Self-Employed	0.10	0.10	0.10	0.12	0.09
	(0.30)	(0.30)	(0.30)	(0.32)	(0.28)
Employer	0.07	0.06	0.07	0.05	0.08
	(0.25)	(0.25)	(0.25)	(0.22)	(0.26)
Employee	0.09	0.09	0.10	0.16	0.06
	(0.29)	(0.29)	(0.30)	(0.36)	(0.23)
Casual Worker	0.03	0.03	0.03	0.01	0.03
	(0.16)	(0.16)	(0.16)	(0.12)	(0.17)
Unpaid Worker	0.19	0.20	0.19	0.06	0.26
	(0.39)	(0.40)	(0.39)	(0.24)	(0.44)
Others	0.53	0.53	0.52	0.60	0.48
	(0.50)	(0.50)	(0.50)	(0.49)	(0.50)
Income (Rp.)					
Household Income	0.99	0.97	1.04	1.55	0.70
	(1.42)	(1.43)	(1.50)	(1.90)	(1.23)
Square of Household Income	2.99	2.97	3.33	6.12	1.54
	(15.03)	(15.00)	(23.50)	(30.22)	(7.02)
Household Characteristics					
Birth Order	2.32	2.33	2.32	2.23	2.37
	(1.18)	(1.18)	(1.17)	(1.11)	(1.21)
Number of Children Aged 0-5	0.44	0.44	0.45	0.41	0.46
	(0.66)	(0.66)	(0.65)	(0.63)	(0.67)
Number of Children Aged 6-9	0.47	0.47	0.47	0.42	0.49
	(0.63)	(0.63)	(0.63)	(0.60)	(0.64)
Number of Children Aged 10-14	0.54	0.54	0.54	0.51	0.56
	(0.68)	(0.68)	(0.68)	(0.66)	(0.69)
Number of Children Aged 15-17	0.33	0.33	0.34	0.33	0.34
	(0.55)	(0.54)	(0.55)	(0.55)	(0.55)
Number of Adults	2.77	2.77	2.77	2.86	2.72
	(1.08)	(1.08)	(1.08)	(1.16)	1.03)
Rural	0.64	0.65	0.63	-	-
	(0.48)	(0.48)	(0.48)		
Land Ownership					
Privately owned: Paddy	0.02	0.02	0.01	0.01	0.02
	(0.12)	(0.13)	(0.11)	90.08)	(0.14)
Privately owned: Dry Land	0.05	0.05	0.05	0.01	0.08
	(0.22)	(0.22)	(0.23)	(0.11)	(0.26)
Privately owned but managed by others (both paddy and dry land)	0.004	0.004	0.004	0.002	0.005
	(0.06)	(0.06)	(0.06)	(0.04)	(0.07)
Province					
NAD	0.05	0.05	0.05	0.04	0.05
	(0.21)	(0.21)	(0.22)	(0.19)	(0.23)
North Sumatera	0.08	0.08	0.08	0.09	0.08
	(0.27)	(0.27)	(0.27)	(0.28)	(0.27)
West Sumatera	0.04	0.04	0.04	0.04	0.04
	(0.20)	(0.19)	(0.20)	(0.20)	(0.20)
Riau	0.03	0.03	0.03	0.02	0.03
	(0.17)	(0.17)	(0.16)	(0.15)	(0.17)
Jambi	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.15)	(0.12)	(0.17)
South Sumatera	0.04	0.04	0.04	0.03	0.04
	(0.19)	(0.19)	(0.19)	(0.18)	(0.19)
Bengkulu	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.15)	(0.11)	(0.17)

Table 4A-2: Descriptive Statistics, SUSENAS 2005 (*continued*).

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Lampung	0.03	0.03	0.03	0.02	0.03
	(0.16)	(0.16)	(0.16)	(0.14)	(0.17)
Bangka-Belitung	0.01	0.01	0.01	0.01	0.01
	(0.11)	(0.11)	(0.11)	(0.12)	(0.11)
Riau Islands	0.01	0.01	0.01	0.02	0.01
	(0.10)	(0.10)	(0.10)	(0.13)	(0.07)
DKI Jakarta	0.02	0.02	0.02	0.06	-
	(0.14)	(0.14)	(0.15)	(0.24)	
West Java	0.06	0.06	0.07	0.10	0.04
	(0.25)	(0.24)	(0.25)	(0.30)	(0.20)
Central Java	0.08	0.08	0.08	0.10	0.07
	(0.27)	(0.27)	(0.27)	(0.30)	(0.26)
DIY	0.01	0.01	0.01	0.01	0.01
	(0.09)	(0.09)	(0.09)	(0.11)	(0.08)
East Java	0.08	0.08	0.08	0.10	0.07
	(0.27)	(0.27)	(0.27)	(0.30)	(0.25)
Banten	0.02	0.02	0.02	0.03	0.01
	(0.14)	(0.14)	(0.14)	(0.16)	(0.12)
Bali	0.02	0.02	0.02	0.02	0.02
	(0.13)	(0.13)	(0.13)	(0.14)	(0.12)
West Nusa Tenggara	0.02	0.02	0.02	0.02	0.02
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
East Nusa Tenggara	0.04	0.04	0.04	0.02	0.05
	(0.20)	(0.20)	(0.20)	(0.14)	(0.22)
West Kalimantan	0.03	0.03	0.03	0.02	0.04
	(0.17)	(0.17)	(0.18)	(0.15)	(0.19)
Central Kalimantan	0.03	0.04	0.03	0.02	0.04
	(0.18)	(0.19)	(0.18)	(0.14)	(0.20)
South Kalimantan	0.02	0.02	0.02	0.02	0.03
	(0.15)	(0.15)	(0.15)	(0.14)	(0.16)
East Kalimantan	0.03	0.03	0.03	0.04	0.02
	(0.16)	(0.16)	(0.16)	(0.19)	(0.14)
North Sulawesi	0.02	0.02	0.02	0.02	0.02
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Central Sulawesi	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.14)	(0.11)	(0.17)
South Sulawesi	0.07	0.07	0.06	0.05	0.08
	(0.25)	(0.25)	(0.25)	(0.21)	(0.27)
Southeast Sulawesi	0.03	0.03	0.03	0.02	0.04
	(0.17)	(0.17)	(0.17)	(0.14)	(0.19)
Gorontalo	0.01	0.01	0.01	0.01	0.01
	(0.10)	(0.09)	(0.10)	(0.08)	(0.10)
Maluku	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.13)	(0.13)	(0.10)	(0.14)
North Maluku	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.13)	(0.13)	(0.11)	(0.14)
Papua	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.14)	(0.13)	(0.10)	(0.15)
Number of Observations	145,744	76,717	69,027	52,128	93,616

Notes: Standard deviations are reported in brackets.

Table 4A-3: Descriptive Statistics, SUSENAS 2007.

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Child Activity					
Schooling	0.91	0.89	0.94	0.95	0.89
	(0.28)	(0.31)	(0.24)	(0.23)	(0.31)
Working	0.13	0.16	0.10	0.07	0.16
	(0.34)	(0.37)	(0.22)	(0.26)	(0.37)
Work and School	0.06	0.07	0.05	0.03	0.08
	(0.24)	(0.26)	(0.22)	(0.18)	(0.27)
Child Characteristics					
Age	13.21	13.28	13.13	13.37	13.13
	(2.27)	(2.29)	(2.25)	(2.30)	(2.25)
Female	0.46	-	-	0.47	0.45
	(0.50)			(0.50)	(0.50)
Biological child	0.92	0.92	0.91	0.91	0.92
	(0.27)	(0.26)	(0.28)	(0.29)	(0.27)
Household Head's Characteristics					
Age	45.40	45.48	45.30	45.62	45.27
	(9.12)	(9.13)	(9.10)	(8.52)	(9.42)
Female Headed	0.001	0.001	0.001	0.001	0.001
	(0.03)	(0.03)	(0.02)	(0.03)	(0.02)
Household Head's Education					
Not Completed Primary	0.05	0.06	0.05	0.02	0.07
	(0.22)	(0.23)	(0.22)	(0.15)	(0.25)
Completed Primary	0.49	0.50	0.48	0.34	0.58
	(0.50)	(0.50)	(0.50)	(0.47)	(0.49)
Junior Secondary	0.16	0.16	0.16	0.17	0.16
	(0.37)	(0.37)	(0.37)	(0.37)	(0.37)
Senior Secondary	0.21	0.21	0.22	0.32	0.15
	(0.41)	(0.40)	(0.41)	(0.47)	(0.36)
Tertiary Education	0.08	0.08	0.09	0.15	0.04
	(0.27)	(0.27)	(0.28)	(0.36)	(0.20)
Household Head's Employment					
Self-Employed	0.23	0.23	0.23	0.25	0.22
	(0.42)	(0.42)	(0.42)	(0.43)	(0.42)
Employer	0.40	0.41	0.39	0.20	0.51
	(0.49)	(0.49)	(0.49)	(0.40)	(0.50)
Employee	0.31	0.30	0.31	0.47	0.22
	(0.46)	(0.46)	(0.46)	(0.50)	(0.41)
Casual Worker	0.01	0.01	0.02	0.02	0.01
	(0.12)	(0.12)	(0.12)	(0.13)	(0.12)
Unpaid Worker	0.01	0.01	0.01	0.01	0.01
	(0.10)	(0.10)	(0.10)	(0.08)	(0.11)
Others	0.03	0.03	0.03	0.05	0.02
	(0.18)	(0.18)	(0.18)	(0.22)	(0.15)
Spouse's Characteristics					
Spouse's Education					
Not Completed Primary	0.08	0.09	0.08	0.04	0.11
	(0.27)	(0.28)	(0.27)	(0.19)	(0.31)
Completed Primary	0.53	0.54	0.52	0.38	0.61
	(0.50)	(0.50)	(0.50)	(0.49)	(0.49)
Junior Secondary	0.16	0.16	0.17	0.19	0.15
	(0.37)	(0.37)	(0.37)	(0.39)	(0.36)
Senior Secondary	0.16	0.16	0.17	0.28	0.10
	(0.37)	(0.37)	(0.38)	(0.45)	(0.31)
Tertiary Education	0.06	0.05	0.06	0.11	0.03
	(0.23)	(0.23)	(0.24)	(0.32)	(0.17)

Table 4A-3: Descriptive Statistics, SUSENAS 2007 (*continued*).

	All	Gender		Region	
		Boys	Girls	Urban	Rural
Spouse's Employment					
Self-Employed	0.09	0.09	0.10	0.13	0.08
	(0.29)	(0.29)	(0.29)	(0.33)	(0.27)
Employer	0.09	0.09	0.09	0.08	0.09
	(0.28)	(0.28)	(0.29)	(0.27)	(0.29)
Employee	0.12	0.11	0.12	0.18	0.08
	(0.32)	(0.31)	(0.33)	(0.38)	(0.28)
Casual Worker	0.01	0.01	0.01	0.01	0.01
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Unpaid Worker	0.28	0.29	0.28	0.10	0.38
	(0.45)	(0.45)	(0.45)	(0.30)	(0.49)
Others	0.41	0.41	0.41	0.51	0.36
	(0.49)	(0.49)	(0.49)	(0.50)	(0.48)
Income (Rp.)					
Household Income	1.04	1.01	1.08	1.69	0.69
	(1.48)	(1.43)	(1.53)	(1.89)	(1.04)
Square of Household Income	3.26	3.05	3.51	6.46	1.55
	(19.84)	(15.18)	(24.21)	(31.80)	(7.32)
Household Characteristics					
Birth Order	2.35	2.37	2.33	2.24	2.41
	(1.21)	(1.22)	(1.20)	(1.12)	(1.26)
Number of Children Aged 0-5	0.49	0.49	0.49	0.43	0.52
	(0.69)	(0.69)	(0.69)	(0.64)	(0.71)
Number of Children Aged 6-9	0.46	0.46	0.46	0.42	0.49
	(0.62)	(0.63)	(0.62)	(0.59)	(0.64)
Number of Children Aged 10-14	0.52	0.52	0.51	0.48	0.53
	(0.67)	(0.68)	(0.67)	(0.65)	(0.69)
Number of Children Aged 15-17	0.32	0.32	0.33	0.33	0.32
	(0.55)	(0.54)	(0.55)	(0.56)	(0.54)
Number of Adults	2.76	2.76	2.77	2.86	2.71
	(1.08)	(1.08)	(1.09)	(1.17)	(1.03)
Rural	0.65	0.66	0.64	-	-
	(0.48)	(0.47)	(0.48)		
Province					
NAD	0.05	0.05	0.05	0.03	0.06
	(0.21)	(0.21)	(0.22)	(0.18)	(0.23)
North Sumatera	0.08	0.08	0.08	0.09	0.08
	(0.27)	(0.27)	(0.28)	(0.28)	(0.27)
West Sumatera	0.04	0.04	0.04	0.04	0.04
	(0.20)	(0.20)	(0.21)	(0.20)	(0.21)
Riau	0.03	0.03	0.03	0.02	0.03
	(0.16)	(0.16)	(0.16)	(0.15)	(0.17)
Jambi	0.02	0.02	0.02	0.02	0.03
	(0.15)	(0.15)	(0.15)	(0.12)	(0.16)
South Sumatera	0.03	0.03	0.03	0.03	0.04
	(0.18)	(0.18)	(0.18)	(0.17)	(0.19)
Bengkulu	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	(0.14)	(0.12)	(0.16)
Lampung	0.03	0.03	0.02	0.02	0.03
	(0.16)	(0.16)	(0.15)	(0.14)	(0.17)
Bangka-Belitung	0.01	0.01	0.01	0.01	0.01
	(0.11)	(0.11)	(0.11)	(0.12)	(0.10)
Riau Islands	0.01	0.01	0.01	0.02	0.01
	(0.11)	(0.11)	(0.11)	(0.15)	(0.18)
DKI Jakarta	0.02	0.02	0.02	0.06	-
	(0.14)	(0.13)	(0.15)	(0.23)	

Table 4A-3: Descriptive Statistics, SUSENAS 2007 (*continued*).

	All	Gender		Region	
		Boys	Girls	Urban	Rural
West Java	0.07	0.07	0.07	0.11	0.05
	(0.25)	(0.25)	(0.26)	(0.31)	(0.21)
Central Java	0.08	0.08	0.07	0.10	0.06
	(0.26)	(0.27)	(0.26)	(0.30)	(0.24)
DIY	0.01	0.01	0.01	0.01	0.01
	(0.08)	(0.08)	(0.08)	(0.10)	(0.07)
East Java	0.08	0.08	0.08	0.10	0.06
	(0.27)	(0.27)	(0.27)	(0.30)	(0.24)
Banten	0.02	0.02	0.02	0.03	0.02
	(0.14)	(0.14)	(0.14)	(0.16)	(0.12)
Bali	0.02	0.02	0.01	0.02	0.01
	(0.12)	(0.12)	(0.12)	(0.14)	(0.11)
West Nusa Tenggara	0.02	0.02	0.02	0.02	0.02
	(0.14)	(0.14)	(0.14)	(0.14)	(0.13)
East Nusa Tenggara	0.04	0.04	0.04	0.02	0.06
	(0.21)	(0.21)	(0.20)	(0.14)	(0.23)
West Kalimantan	0.03	0.03	0.03	0.02	0.04
	(0.17)	(0.17)	(0.17)	(0.14)	(0.19)
Central Kalimantan	0.03	0.03	0.03	0.02	0.04
	(0.18)	(0.18)	(0.17)	(0.14)	(0.19)
South Kalimantan	0.02	0.02	0.03	0.02	0.03
	(0.16)	(0.16)	(0.16)	(0.14)	(0.16)
East Kalimantan	0.03	0.03	0.03	0.04	0.02
	(0.16)	(0.16)	(0.16)	(0.19)	(0.15)
North Sulawesi	0.02	0.02	0.02	0.02	0.03
	(0.15)	(0.15)	(0.15)	(0.13)	(0.16)
Central Sulawesi	0.02	0.02	0.02	0.01	0.03
	(0.15)	(0.15)	90.14)	(0.11)	(0.16)
South Sulawesi	0.05	0.05	0.05	0.04	0.06
	(0.22)	(0.23)	(0.22)	(0.19)	(0.23)
Southeast Sulawesi	0.03	0.03	0.03	0.02	0.03
	(0.16)	(0.17)	(0.16)	(0.12)	(0.18)
Gorontalo	0.01	0.01	0.01	0.01	0.02
	(0.12)	(0.12)	(0.12)	(0.10)	(0.13)
West Sulawesi	0.01	0.01	0.01	0.01	0.02
	(0.11)	(0.11)	(0.11)	(0.08)	(0.12)
Maluku	0.02	0.02	0.02	0.01	0.02
	(0.13)	(0.13)	(0.13)	(0.11)	(0.14)
North Maluku	0.02	0.02	0.02	0.01	0.02
	(0.12)	(0.12)	(0.12)	(0.09)	(0.14)
West Papua	0.01	0.01	0.01	0.01	0.01
	(0.09)	(0.09)	(0.10)	(0.08)	(0.10)
Papua	0.02	0.02	0.02	0.01	0.03
	(0.14)	(0.14)	(0.15)	(0.11)	(0.16)
Number of Observations	151,141	81,860	69,281	52,771	98,370

Notes: Standard deviations are reported in brackets.

CHAPTER 5: HOUSEHOLD'S NON-LEISURE TIME ALLOCATION FOR CHILDREN IN INDONESIA.

5.1 Introduction

Improving the quality of human resources by implementing the 9-year compulsory education is the main objective of Government of Indonesia since it was enacted in 1999. This should serve all children regardless of their backgrounds relative to their family, origins, social affiliation and gender groups (National Coordination Forum of Education for All, 2003). Therefore, the development of human resources is effectively impossible without an emphasis on education. According to Wu (2009), human capital can be accumulated through informal, as well as formal schooling. In Indonesia, the education system is organized in three different paths, such as formal, non-formal and informal education. Particularly, formal education is organized in schools through teaching and learning activities that are hierarchical and continuous. Non-formal education is organized outside the formal schooling through teaching and learning activities. However, it may or may not be hierarchical and continuous. Informal education is known as education within the family which emphasises on important part of the out-of-school education and provides religious, cultural and moral values and family skills. Informal schooling often entails learning skills from family members. In particular, women from low income families often develop skills that can be used to improve the welfare of their families[1]. Thus, a family-run business can reduce the

[1]Home Business Skills Library for Low Income Family. Retrieved January 17, 2013 from http://www.globalgiving.co.uk/projects/home-business-skills-library/

problem of rural poverty. These skills could be taught to children at an early age, giving them informal working experience.

In Indonesia, children stereotypically initiate working around age five. Recent labour force survey revealed that labour force participation rate of children ages 5-17 was about 4.1% in 1999. In addition, approximately, 82% of the total numbers of children (58.8 million) attend school. Hence, for children who are involved in economic activities while simultaneously attending school, the extent of how labour supply affects the quantity of time that is allocated to develop skills comes into question. Moreover, 6% of the total numbers of children are in the category of neither work nor schooling. There are several reasons which hinder children from going to school. For children, their time allocation is decided by parents, who directly affect the child's current utility. It has been argued that the households wherein children live determine the ways how children spend their time. According to Bonsang and Faye (2005), households allocate time for different activities among their household members through an internal mechanism. In addition, they also allocate household resources for consumption, saving and investment including human capital formation between themselves. Thus, children's activities heavily rely on factors that may affect household's constraints, opportunities and incentives. The decision of sending children to school or not depends on the extent to which households need their labour to reach some level of welfare. On the other hand, if a child is engaged in work, he or she receives less education which results in lower earnings in the future. A child can go to school full time or work full time or combine work and school or do neither work nor study. Since the majority of children who were sent to work are from poor families, the fact that education serves as an engine for both the social and economic development of most societies was ignored, especially in rural areas. However, concurrent working and studying has a negative

impact on the transition to secondary school (Ridao-Cano, 2001). Consequently, children tend to drop out of school, which leads them to participate in full-time work, or to participate neither in school nor work.

This chapter considers four alternatives of the non-leisure time allocation of children. These activities include school only, work only, concurrent working and studying and do neither work nor school. By considering 'idleness' or neither work nor schooling, explicitly as one of the activities along with schooling, and working seems to be significant from a policy perspective (Ranjan, 2004). Furthermore, children may be "idle" because there are no work opportunities. All at once, parents' perceived low returns from schooling prohibit them to send their children to school. Therefore, neither work nor school category is necessary to be included in analysing the time allocation of children in Indonesia. This is particularly true in rural areas where access to school may be difficult, in terms of the distance to school. However, as mentioned earlier, the household decisions on their child's time allocation is mainly depending on the household's perception of the highest relative returns from one of the activities. According to Ranjan, the policy of increasing child schooling either by improving the school facilities or providing subsidies and increase the budget on education, should be managed to pull out the 'idle' children to enrol in school. Government expenditure on Indonesia's education is comparably lower than of its neighbouring countries, such as Malaysia and Thailand. The proportion of allocated budget compared with Gross Domestic Product (GDP) was only 1.4%. This proportion is the lowest compared to Malaysia (4.9% of GDP) and Thailand (4.8% of GDP), and it is even lower than China where they allocated 2.3% of its GDP for education despite China having a much higher population compared to Indonesia (National Coordination Forum of Education for All, 2003).

In this chapter, we postulate that children's activities in Indonesia depend on the level of child characteristics, household characteristics, community characteristics and the availability of basic services such as access to drinkable water, sanitation, electricity and number of schools. We distinguish four types of mutually exclusive activities in which children are engaged, which are attending school only, work only, combine both schooling and working and neither work nor schooling. Since the database that we use does not allow determining whether children combine two or more activities, we focus only on children main activity, which they devote the most part of their time. Thus, one caveat to this option is that children activities are not always mutually exclusive. Our estimation framework comprises of a multinomial logit model, which is largely used in the previous literature and jointly estimate the equations of the different child activities. This approach considers the hypothesis that households' decisions on the non-leisure time allocation for children are not independent. In addition, it also allows assuming that the decision process between these activities is simultaneous (Bonsang and Faye, 2005). A similar approach is used by Cartwright and Patrinos (1999), Ray (1999), Grootaert (1999), Burki and Shahnaz (2001) Maitra and Ray (2002), and Ali and Khan (2003). The primary objective of this chapter is to provide a better understanding of the determinants of non-leisure time allocation of children in Indonesia. This includes a leisure time instead of schooling and working. The role of access to basic services and facilities can affect the value of children's time and household decisions on how their child's time is allocated. Therefore, this chapter also investigates the link between child activity and basic services (water, sanitation and electricity access) and facilities (number of schools, student-teacher ratio, telephone and computer) in Indonesia. In addition, we separate each estimation to each group of age: 10-14 years and 15-17 years, and also for boys and girls, and for children in urban and rural areas, in an

attempt to encounter some additional understandings about the time allocation decision. This is because the differences by age, gender and region would reflect differences in the household decision depending of the child, household and community characteristics.

The remainder of this chapter is organized as follows. Section 5.2 presents the theoretical framework. A brief review of data sets, with an explanation of dependent and explanatory variables is explained in Section 5.3. Descriptive statistics of the data sets used are discussed in Section 5.4, and Section 5.5 presents the econometrics specification of the used models in this chapter. Section 5.6 reports the results from the estimation of multinomial logit models. Finally, Section 5.7 summaries and concludes the chapter.

5.2 Theoretical Framework

Following Burki and Fasih (1998), households are assumed to be rational decision-making units that make choices between leisure time and consumption of goods to maximize their utility subject to time and budget constraints. Children are considered not to make their own decisions independently. In other words, children are under the control of their parents. Therefore, considering the time allocation of different members of the household, we assume that the household maximizes the following utility function:

$$U = U(L_h, L_w, L_c, Y) \tag{5.1}$$

where L_h is leisure hours for the husband, L_w is leisure hours for the wife, L_c is leisure hours for children in the household, and Y is the Hicksian composite good representing the consumption of all goods other than leisure[2]. The budget constraint facing the household is given by[3]:

$$W_h L_h + W_w L_w + W_c L_c + P_y Y = M \equiv I + W_h \delta_h + W_w \delta_w + W_c \quad (5.2)$$

where W_h, W_w and W_c are the wage rates of the husband, wife, and children; P_y represents the price of the composite good, I is non-labour income, M is full income, and δ is the total number of hours available for work, where;

$$L + \delta = T$$

where T is the total time. Maximizing the household utility function (5.1) subject to the budget constraint (5.2) produces the demand functions for the leisure of the husband, wife and children, and for consumption of the composite good, which is:

$$L_i = F_i(W_h, W_w, W_c, P_y; M) \qquad i = h, w, c$$

$$Y = F_y(W_h, W_w, W_c, P_y; M) \quad (5.3)$$

Substituting these optimised demand functions (5.3) into the utility function (5.1) gives the indirect utility function for each household, which is maximized by given prices and incomes. As stated by McFadden (1973), there are errors in the maximization process, due to imperfect information, knowledge, and perception of the households; this creates a random function of household utility.

[2] Y is a composite Hicksian commodity under the assumption that the relative prices of different commodities are the same for all individuals throughout the analysis (see Wales and Woodland, 1977).

[3] We assumed that the time spent on household activities does not include in the leisure time.

Following Maddala (1983), we presume that households face 'm' choices for children's time allocation and a latent variable, V_k^* is defined, indicating the level of indirect utility attached with the K^{th} choice. Thus, the variable V_k^* is shown by:

$$V_k = 1 \; if \; V_k = Max\,(V_1^*, V_2^*, \ldots\ldots, V_m^*)$$

$$V_k = 0 \; otherwise \qquad (5.4)$$

The variable V_k is decomposed into a non-stochastic component, $V_k(X_k)$ and a stochastic component, ε_k, (Burki and Fasih, 1998, p.901), which is written as:

$$V_k = V_k(X_k) + \varepsilon_k \qquad k = 1, 2, \ldots\ldots\ldots, m \qquad (5.5)$$

where X_k is the vector of attributes of the K^{th} choice and the errors in perception and optimisation are denoted by ε_k. A typical household is assumed to choose among four mutually exclusive alternatives: only school, work and school, only work, and neither work nor school, which are categorized as 1, 2, 3, and 4, respectively. A household maximizes its utility function subject to the budget and time constraints that were modified to reflect the respective costs and returns imposed by each of the choices, and this result in four indirect utility functions. The household will choose the alternative that maximizes the households' indirect utility by comparing the levels of indirect utility. Thus, the probability that child i participate in the k^{th} activity is the probability that the indirect utility from the k^{th} choice is greater than what derived from other choices (Burki and Fasih, 1998, p.901), which is given by:

$$P_{ik} = P_r(V_{ik} > V_{ij}) \qquad \forall\, j \neq k, j = 1, 2, 3, 4 \qquad (5.6)$$

This denotes that the probability of child i participating in choice k is the probability that the difference between the stochastic components is greater than the difference between the non-stochastic components, or:

$$P_{ik} = P_r(\varepsilon_{ik} - \varepsilon_{ij} > V_{ij} - V_{ik}) \qquad \forall j \neq k, j = 1,2,3,4 \tag{5.7}$$

5.3 Data

The data set used in this study comes from a survey of The National Socioeconomic Survey (SUSENAS) conducted in 2005 and 2007 by the Statistics Indonesia. The SUSENAS records labour force participation and educational information for all household members with the age of 10 years and above which contains questions on labour market participation and educational attainment addressed at adults and children in the household, socioeconomic conditions, employment, working conditions, school participation and highest educational level achievement. The detail of used dataset has been discussed in Section 3.3.1 of Chapter 3.In addition, we also use the published data provided by Statistics Indonesia as a proxy of the availability of basic services and facilities for each province in Indonesia. As noted in previous chapter, children who are reported doing housework are excluded from our sample. We deleted 851 households in 2005 and 921 households in 2007 from our sample due to missing data points, which is related to spouse's characteristics. This leaves us with a sample of 154,809 children in 2005 and 155,327 children in 2007 in the age cohort of 10-17 years. In addition; we also utilized the data from published report provided by Statistics Indonesia which include the percentage of households that have basic services and facilities in each province for the year 2005 and 2007.

5.3.1 Dependent Variables

To create dependent variables, we utilize the information from the survey as below:

a) *School participation (1. Attending school, 2. Never attended/Not yet, 3. Not in school anymore)*

b) *Of these activities (schooling, working, housework, others), which one consumed most of your time in the last one week?*

We postulate that children's activities in Indonesia depend on the household and community characteristics. Those children who are consuming most of their time doing housework in the previous week are excluded from our sample. In addition, we assume 'others' category as in neither work nor schooling. Thus, we include children in 'others' category in our sample as well. These are distinguished by the four types of mutually exclusive activities in which children are engaged using the information given in SUSENAS 2005 and 2007, as follows:

- Children who are going to school and not working.
- Children who are working and going to school.
- Children who are working and not going to school.
- Children who are not working and not going to school.

These four categories are used as a dependent variable in our analysis. The major decision making regarding these four choices are at the household level. In other words, the decision makers are the parents or caretakers of the children. They select the choices that maximise their utility subject to their budget and time constraints.

5.3.2 Explanatory Variables

To capture child characteristics, we use the variables gender, age and relationship to the head of the household. Gender of the children is included in the model in dummy form with boy as the base category. The value of the child time depends on the child's age. The returns to schooling for younger children may be sufficiently high since they spend most of their time in school. On the other hand, older children may work since they are able to earn higher wages in the labour market. Therefore, apart from continuous variable of age, we divided the age to three groups of dummy, such as 10-12 years, 13-14 years (reference category) and 15-17 years to investigate the effects. Biological child is a dummy variable equal to 1 if the child is a biological child of the household head.

Household head characteristics include the gender, age, education and employment of the head of the household. These variables have been included in our analysis because it is expected that the head has an important role in the decision making process on time allocation of the child. In addition, spouse characteristics such as education and employment of the spouse are included to examine the impact on child's activity. The educational level of head of the household and the spouse was entered as dummy variables for each of categories (no schooling, completed primary, junior secondary, senior secondary and tertiary education). No schooling is used as the base category. For the employment status of the household head and spouse, five employment categories were identified using separate dummies such as self-employed (reference category), employer, employee, casual worker, unpaid worker and others. The gender of the household head was included as a dummy which takes value of 1 if the gender of the household head is female.

Household living standards are a key aspect in determining how much a child works. In particular, poor households have higher marginal utilities of current consumption which the value of an additional unit of child work is higher than a rich household. As a proxy of living standard, we included household income which captures the non-child labour earnings of the household. In other words, household income is obtained by subtracting the child's income from the reported household income (sum of income from all other household members). A similar approach is implemented by Jeong (2005). According to Jeong, there could be a positive effect flowing the reverse direction if household income does not subtract the child's contribution. Due to this potential simultaneity bias, we subtract child's income from household income.

The rank of a sibling affects a decision of household in choosing which children are sent to work or to school. As found by Khanam and Rahman (2005) in Bangladesh, a first-born child increases the probability of working or at least combining school with work and the later-born children are more likely to be in school than their earlier-born siblings. Therefore, we include birth order in our analysis to investigate the impact. A larger household size decreases income per household which reduces children's educational participation and parental investment in schooling (Grootaert and Patrinos, 2002). These will increase the likelihood that children will need to generate income to make ends meet. However, according to Grootaert and Patrinos (2002), each child does not have the same probability to be sent to school or to work; that likelihood depends on child's age and gender (see also Patrinos and Psacharapolous, 1997). Therefore, we include the number of children in our analysis based on the groups of age (0-5 years, 6-9 years, 10-14 years and 15-17 years). We also include the number of adults in the household to examine the effects on child's activity. Farmers need more labour as farm size increases. This is likely to decrease schooling and increase the use of child labour.

To examine the effects, we include the land ownership which is the measure of land size in hectare (ha). In particular, three variables of land ownership are used such as, privately own land of paddy, privately own land of dry land, and privately own but managed by others for both paddy and dry land. Moreover, a dummy of region also included, where rural takes a value of 1 if the household resides in rural areas and 0 otherwise.

Variables have been added to investigate the effects of having facilities on making the decisions. All these variables are drawn from published report made by Statistics Indonesia in 2005 and 2007. According to Bonsang and Faye (2005), these basic services and facilities can be used as an instrument for reducing child labour and increasing school attendance. The variables[4] are the percentage of households that own their dwellings, the percentage of households that have improved drinking water, the percentage of households that have improved sanitation, and the percentage of households that have a source of electricity. Most of these variables specify that working children are those who are in households with poor living conditions, while those attending school have better living standards (Bonsang and Faye, 2005). In addition, Rickey (2009) stated that communities with better and more established infrastructures and facilities would have higher school attendance since the costs would be less. Moreover, the availability of these services may affect the value of children's time. A lack of access to water raise the value of children's time in non-schooling activities such as working (fetch water for household use) or neither work nor schooling (cannot afford the cost of schooling). As found by Guarcello et al (2004), the percentage of children who work only and neither work nor schooling is higher and the rate of

[4]The variable of the percentage of household that have improved sanitation and the percentage of the household that have source of electricity are not available for the year of 2005.

school only is lower among children from households without water or electricity access. Since children activities in our sample are not mutually exclusive, it is valuable to examine a correlation between basic services and the activities of children.

In terms of schooling, the number of schools is used to examine whether a high number of schools provided in each province attracts children to attend school. In addition, schools that provide sufficient facilities, including teacher availability, encourage students to attend school. Classes with too many students affect most of the low-attaining students. This is due to too much attention given by the teacher to all students instead of individual attention. Hence, the student-teacher ratio is included to investigate the effects on the household decision. This information also gathered from published report by Ministry of National Education in Indonesia which is available for each province in Indonesia. Furthermore, households that own a telephone and computer are included in the model, to observe the effects of having these two facilities on the child's status. These variables are found in the questionnaire, which is entered as a dummy variable that takes a value of 1 if the household have telephone and computer and 0 otherwise. To measure the size of each region's economy, gross regional domestic product (GRDP) is used in terms of GRDP per capita, which used an indicator of standard of living or a regional's average wealth. This is positively related to school attendance and negatively related to child labour. This GRDP per capita is also obtained from Statistics Indonesia.

To avoid multicollinearity, the provinces are grouped into 7 main islands: Sumatera (NAD, North Sumatera, West Sumatera, Riau, Jambi, South Sumatera, Bengkulu, Lampung, Bangka-Belitung, and the Riau Islands), Java (DKI Jakarta, West Java, Central Java, DIY, East Java, and Banten), Lesser Sunda Islands (Bali, West Nusa

Tenggara and East Nusa Tenggara), Kalimantan (West Kalimantan, Central Kalimantan, South Kalimantan and East Kalimantan), Sulawesi (North Sulawesi, Central Sulawesi, South Sulawesi and Southeast Sulawesi), Maluku (North Maluku and Maluku), and New Guinea (West Papua and Papua). In other words, this is due to a small observation of children in some provinces in each activity. Thus, we grouped the provinces into 7 major islands in Indonesia. Hence, 7 dummy variables are created such as Sumatera, Java, Lesser Sunda Islands, Kalimantan, Sulawesi, Maluku and New Guinea (reference category). The variable names and definitions are given in Table 5A-1, and the summary statistics are given in Table 5A-2 and Table 5A-3.

Descriptive Statistics

On average, age of a child in the school only category is 12.95 and children who are in work only category are those at the average of age of 15.77 (Table 5-A2 to Table 5-A3 in Appendix 5A). This clearly shows that younger children are more likely to be in school, while older children tend to go to work. In addition, children who are on average in the age of 14.7 are likely to be in the neither work nor school category, which is 0.5 year older than children in the work and school category. Girls are more likely to be in school than boys. Children that have a biological relationship with the head of the household are more likely to be sent to school, to combine work and school, and to be in the 'idle' category than to work only.

Children are more likely in work category compared to other category when the household head obtained completed primary educational level. In contrast, household head with tertiary educational level is more likely to have their children in school only. This clearly shows that fewer expectations on the schooling outcome among parents,

plus a lack of facilities in school, make less educated parents send their children to work and also to put their children in the neither work nor school category. In addition, children are found more likely to combine work and school when the head of the household completed junior secondary. In addition, most of the children in the category of school only are living with parents who are self-employed or are employees. Parents who are employers are likely to put their children in the work and school category and the work only category. For parents who are casual workers and unpaid workers, the child's status does not show much difference.

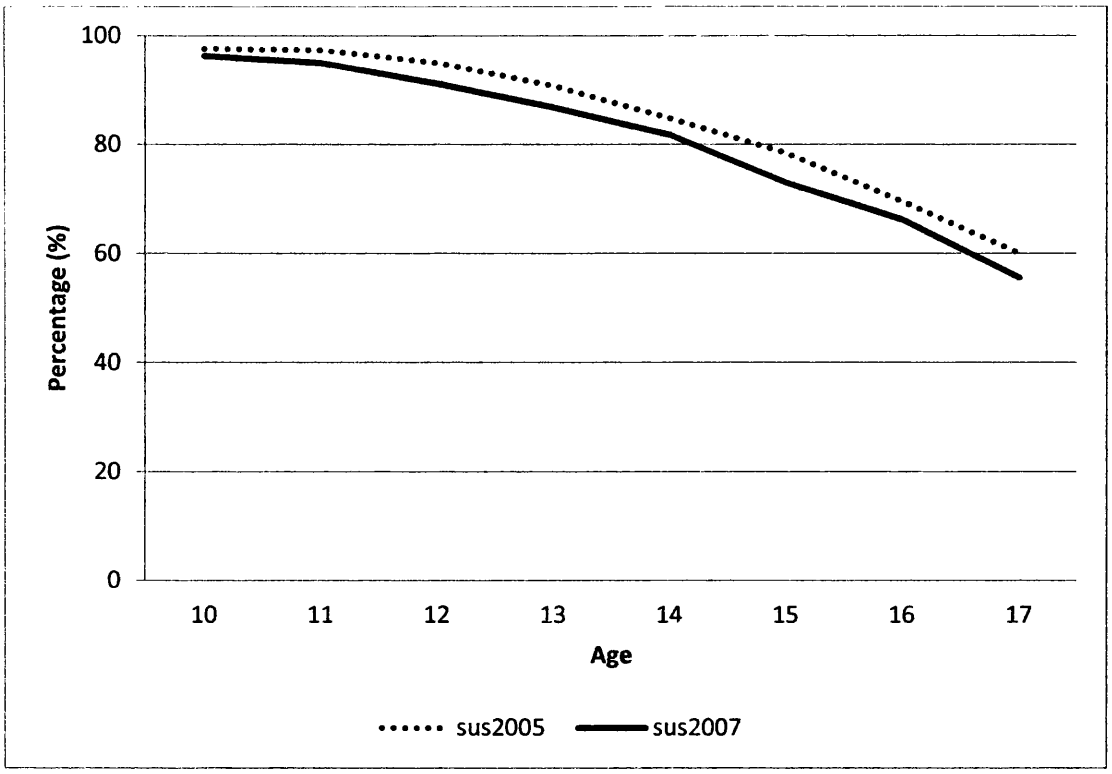
As mentioned in previous literature, low income families are more likely to send their children to work, and this is supported by the mean of household incomes across surveys (also shown by the Gross Regional Domestic Product per capita). However, the lowest average of household income is shown by the work and school category, except in SUSENAS 2007. Average birth order of those who work only is 2.76, while for those with school only is 2.28 in 2005, and the average is not much different in 2007. Having a high average number of children under 15 tends to put the children in the work and school category, work only category, and 'idle' category, instead of the school only category. The opposite holds true for children with the number of children with the age of 15-17 in the household including adults. Approximately, 83% of those who combine work and 76% of children who are in work only are in rural areas. The less percentage of children is in school only in both years of the survey. Finally, the child's status is also influenced by the availability of facilities provided in each province, in each island. In particular, almost 81.27% of households that own their dwelling have their children in work only category in 2005. In 2007, 86.44% of households that have a source of electricity, the children are in neither work nor school category. Moreover,

children are greatly in school only category with a higher Gross Regional Domestic Product per capita (GRDP).

5.4 Children Activities: Some Tabulation

Labour participation and school attendance are influenced by different child, parent, household, and community characteristics. For example, unskilled parents tend to have a high number of children and send them to work. Skilled parents, who have low fertility rates, tend to invest more in education of their children. However, children have the opportunity to combine work and school as well, since such work is often tolerated with flexible school operations. In addition, Kondylis and Manacorda (2006) find that when schools are close by, a higher proportion of children combine work and school in rural Tanzania. This is likely true because the household does not need to pay additional transport costs. Given the cost of education, plus longer distances to school, a household may prefer to neither send the children to work nor to school and these children are known as 'idle' children (Maitra et al, 2006). The percentage of children who attend school only, combine work and school, work only, and attend neither school nor work according to SUSENAS are shown in Figure 5-1 to Figure 5-4.

Figure 5-1: Percentage of Children Who Attend School Only in SUSENAS 2005 and 2007.



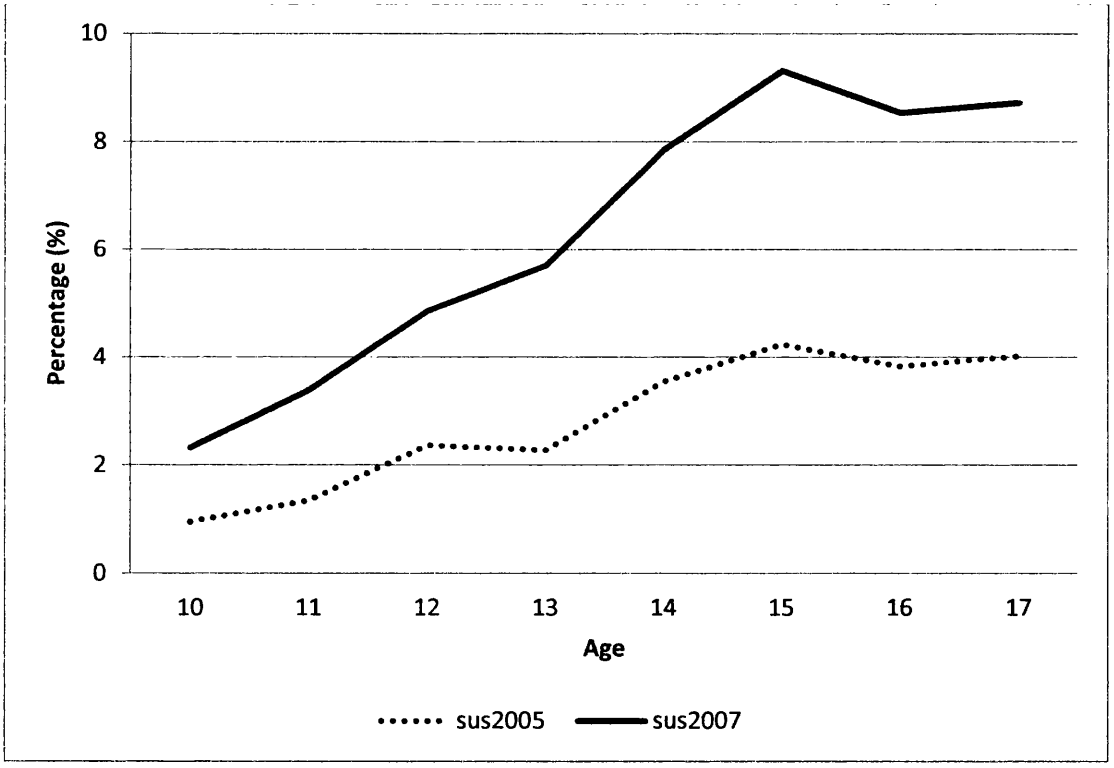
Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

Figure 5-1 shows that school attendance is negatively related to the child's age. It obviously shows that younger children are more likely to go to school compared to the older children. Particularly, the school participation rates for children with the age of 10 years are almost 98% which is higher by 38% of children aged 17 years in 2005. These rates decrease from 2005 to 2007 at all level of ages.

In contrast to the school participation rates, combining work and school is positively related to the child's age (Figure 5-2). In 2005, about 0.95% of children with the age of 10 years do part-time work and also go to school. The rates slightly increases to 2.36% for children with the age of 12 years, then falls by 0.09% for children with the age of 13 years. The rates slightly increase till the peak of 4.24% at the age 15 years, and then slightly decrease to 4.02% at the age 17 years. The higher rates of children with the age of 15-17 years do part-time work and school because children are able to enter the work force in Indonesia at the aged of 15 years. The rate greatly increased from 2005 to

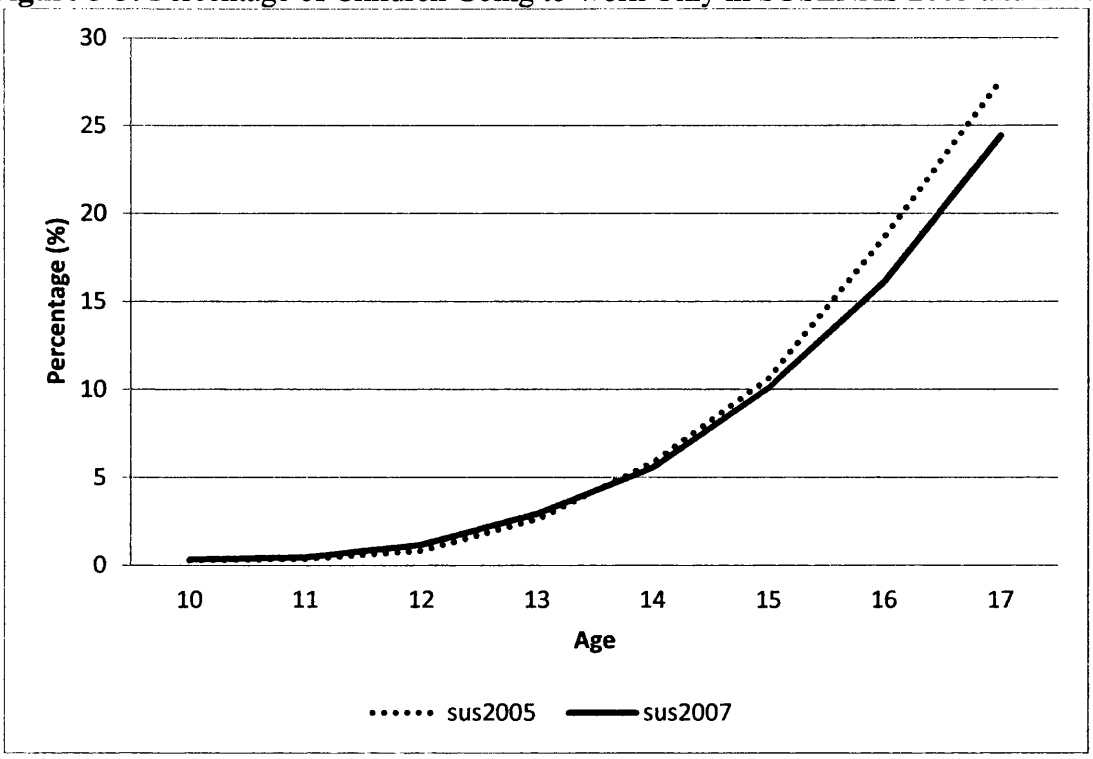
2007, especially at the aged of 15 years and above. This dramatic over-time variation is due to the flexible delivery modes which are designed to make schooling more accommodative of children's work schedules, especially among those children in rural areas. As found by Bhalotra and Heady (2000), farm working children are more likely to combine work and school. As stated in the descriptive statistics, most of children combining work and school are located in rural areas, where working children are mostly engaged as unpaid and casual workers. These proportions increased from 2005 to 2007.

Figure 5-2: Percentage of Children Who Combine Work and School in SUSENAS 2005 and 2007.



Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

Figure 5-3: Percentage of Children Going to Work Only in SUSENAS 2005 and 2007.



Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

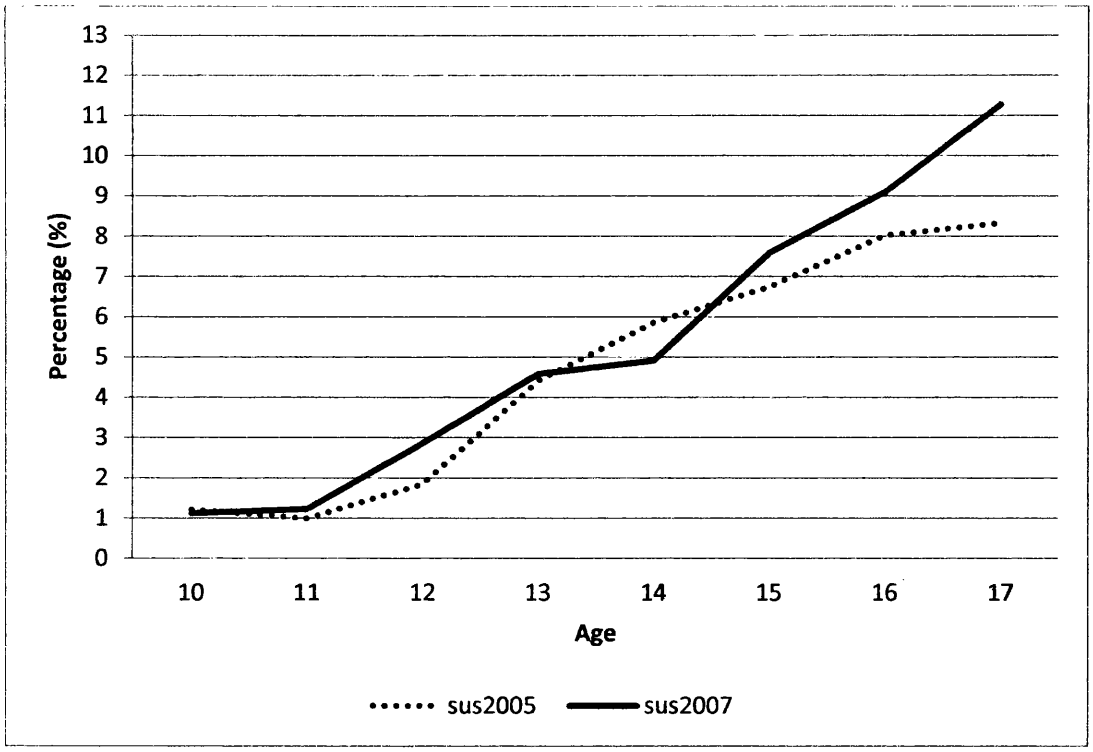
Children are more likely to go to work only as they get older. This can be clearly seen as in Figure 5-3, which shows a limited variation over time. The figure clearly displays that the rates did not have much difference between 2005 and 2007 at the age 10-14 years. In other words, the rates are lower in 2005 than in 2007. However, at the age of 14 years, the rate slightly increased until at the age of 17 years, which is higher in 2005 compared to 2007. Particularly, almost 19% of children in the age of 16 in work only category in 2005 and the rate decrease to 16% in 2007.

Figure 5-4 shows that the percentages of children who neither work nor go to school increases considerably with age. At the age of 11 and 12 years, the rate in 2005 is lower than the rates in 2007. We also see the rates are almost equal in 2005 and 2007 at the age of 13 years. Then the rate increases a little by 0.34% at the age of 14 years in 2007. However, at this age level, the rates are higher in 2005 compared to 2007 due to the 1.44% increase of children. This increase continues at the age of 15 until 17 years with

the rates which are higher in 2007 than in 2005. According to the 2010 national census, about 3.5 million children in Indonesia were not attending primary or junior secondary school (The United Nations Children's Funds, UNICEF). As found by Utomo et al. (2014), almost 30% of school leavers children are neither work nor school are between the ages of 12-18 years, which are relatively higher for girls than boys. Though the law in Indonesia provides for free education, in practice most schools are not free of charge. In addition, poverty places for education are out of reach of many children[5]. There is no specific policy to reduce the number of 'idle' children in Indonesia comprehensively. However, Ministry of National Education has provided educational support such as Operational Aids for School (*Bantuan Operasional Sekolah*, BOS), Scholarship for Poor Children (*Biasiswa Siswa Miskin*, BSM) and Equivalency Education Packet A, B C (*Pendidikan Kesetaraan Paket A, B dan C*). BOS aims to reduce the burden of operational costs, which is beneficial for poor communities, where expense for education was replaced from parents to schools. BSM providing scholarships for the poor to access basic education, promoting compulsory 9 years of basic education and reduced drop-out rate. For dropped out children, Equivalency Education offers non-formal and informal education which is equivalent to primary and secondary school level. Children get the graduation certificate and some skills to work (ILO, 2011).

[5] _____ (2006). 'Indonesia'. Retrieved August 24, 2013 from http://www.human trafficking.org/countries/indonesia

Figure 5-4: Percentage of Children neither in School nor Work in SUSENAS 2005 and 2007.



Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

Figure 5-5 and Figure 5-6 in Appendix 5B present the fraction of the four activities (school only, combined work and school, work only, and neither work nor school) by gender and area of residence across the years of the survey. The school participation rate seems higher for girls compared to boys (Figure 5-8a). In particular, at the age of 17 years, it clearly shows the rates for girls who are still in school are higher compared to boys. The rates are obviously declining from 2005 to 2007 for both genders. As expected, the school participation rates in rural areas are lower than in urban areas (Figure 5-6a). In contrast, girls are highly found to be in school compared to work. Figure 5-5(c) displays that boys are more likely to go to work, especially at the age 15 years and above. This is particularly true since children are allowed to start doing light work at the age of 15 years. In addition, children in urban areas are less likely to work only as shown in Figure 5-5(c). The rates of work and school are higher as children gets older. The peak can be seen at the age of 15 years among boys (Figure 5-7b) and in rural

areas (Figure 5-6c). Compared to girls, boys are more likely to be in neither work nor school, and the higher rates are shown among boys and girls at the age of 14 years in 2005 (Figure 5-7d). An urban-rural divide shows that children in rural areas have higher rates in neither work nor school in both years of survey (Figure 5.6d).

5.5 Econometric Specification

The multinomial logit is an appropriate technique of estimation to study the interaction of child labour and child schooling participation/non-participation rates, which extends the previous study which relied on bivariate probit estimation. Multinomial logit estimation simultaneously analyses four possibilities of child's activity. In addition, such extension has been made possible by the recent availability on child participation rates than what was available previously. A similar approach is used by Psacharopoulos (1997), Cartwright and Patrinos (1999), Deb and Rosati (2001), Ray and Lancaster (2003) and Khanam (2004). Bivariate probit in the previous chapter recognizes four outcomes such as school and work, school and no work, no school and work, and no school no work. Multinomial logit estimation is similar to the logistic regression model, except that the probability distribution of the response is multinomial instead of binomial (Moyi, 2011). The model assumes that the choice of outcomes must be independent. In addition, it requires that the inclusion or exclusion of categories does not affect the relative risks associated with the explanatory variables in the remaining categories. The advantage of using multinomial logit is that it permits the analysis of decisions across more than two categories, which allows for the determination of choice probabilities for different categories of child activity. Apart from the well-known

drawbacks of the Independence of Irrelevant Alternatives (IIA), this approach is more appropriate than the probit or logit model that is conventionally used.

Households trying to maximize their utility face a choice between discrete options. Four mutually exclusive options are listed here: child attends school only, child works only, child attends work and school, and child neither goes to school nor work. Suppose there are numbers of children, $i = 1, 2, 3, \ldots N$. Given four choices of categories, $j = 1, 2, 3, 4$, the multinomial logit assigns probabilities P_{ij} to events characterized as "i^{th} child in j^{th} category". To estimate this model, the category of child attending school only is referred to as the "reference state". Therefore, the probabilities in the multinomial logit model can be specified as:

$$Pr(Y_i = j) = \frac{e^{\beta_j' x_i}}{1 + \sum_{k=1}^{j} e^{\beta_k' x_i}}$$

$$Pr(Y_i = 0) = \frac{1}{1 + \sum_{k=1}^{j} e^{\beta_k' x_i}} \qquad \text{for j} = 1, 2, 3, 4 \qquad (5.8)$$

where, β_j is a vector of coefficients and x_i is a vector of conditioning explanatory variables. However, the coefficients of the multinomial logit model are difficult to interpret. Neither the sign nor the magnitude of the coefficients has a direct intuitive meaning. Hence, partial derivatives are calculated to interpret the effect of the independent variables on the probabilities of each category.

$$\frac{\partial P_j}{\partial x_i} = P_j \left[\beta_j - \sum_{k=1}^{J} P_k \beta_k \right] \qquad (5.9)$$

where, P is the probability of participation of each category. The log-probability function is:

$$\ln L = \sum_{i=1}^{n} \sum_{j=0}^{J} d_{ij} \ln \Pr(Y_i = j) \quad (5.10)$$

Where, $d_{ij} = 1$ if individual i chooses alternative j, and $d_{ij} = 0$ otherwise.

5.6 Estimation Results

Using multinomial logit specification with 154,809 observations in 2005 and 155,327 observations in 2007, a result of maximum likelihood that was used to estimate the parameters are given in Table 5-3 to Table 5-8. Percentages of correct predictions for each category are given in Table 5-1 and Table 5-2. The percentage of correct prediction is greater than 50% in 2005 and 2007. The Chi-squared value is also highly significant in each estimate in both years of the survey. The significance level of coefficients on the residual variable forms the basis of the exogeneity test. Therefore, the null hypothesis of the exogeneity of productivity variable was rejected.

The multinomial logit model is estimated with the maximum probability estimation procedure on a set of covariates, including child characteristics, household characteristics, and community characteristics, which are the factors behind the participation of children in schooling and economic activities. We provide the size of effects, the marginal effects or predicted probabilities on the basis of the multinomial logit model. These marginal effects coefficients were evaluated at the mean and presented in Table 5-3 to Table 5-8 and Table 5A-4 to Table 5A-11. Table 5-3 to Table 5-8 present the estimates of the model; two sets of numbers are reported which are marginal effects and their standard errors (in parentheses). Table 5-3 (column 1-3) and

Table 5-6 (column 1-3) present the results for all children while Table 5-3 (column 4-9) and Table 5-6 (column 4-9) display the results by gender. Table 5-4 (column 1-6) and Table 5-7 (column 1-6) display the results by area of residence separately for each year of the survey. We estimate the sample by gender and region to see if there are any gender or location impacts on child participation in non-leisure activities. In addition, Table 5-4 (column 7-9) and Table 5-5 indicate the results of gender by region in 2005, while the results for 2007 are given in Table 5-7 (column 7-9) and Table 5-8. Since the result in pooled sample has discussed the age effects in detail, we do not deeply analyse the results by groups of age. However, the results for children in age of 10-14 years and 15-17 years are given in Table 5A-4 to Table 5A-9 for 2005 and Table 5A-10 and Table 5A-11 in Appendix 5A.

5.6.1 Child Characteristics

In our model, there are three variables characterizing the child: age, gender, and relationship to the head of the household. As found by Bonsang and Faye (2005) in their study of child labour in Senegal, the probability to work significantly increases as boys or girls get older. The probability of "work only", "school and work" and "neither work nor school" increases with age as opposed to the probability of 'school only" (Table 5-3 and Table 5-6). One possible explanation of this result is the fact that as children grow up, their opportunity cost for "school only" increases, thus, they either "study and work", "work only" or being "idle". A study by Grootaert (1998) in Cote d'Ivoire, Cigno and Rosati (2002) in India and Khanam (2005) in Bangladesh find similar effects of age on the probability of "school and work" and "work only". Mixed effects of age on the probability of "work only" has been found by Cigno and Rosati where the

probability of work only decreases for the children up to 8 years old, then increase at the age up to 12 years, and then decreases again. Our result also confirms that older children are more likely to be in "neither work nor school" (Table 5-3 and Table 5-6) category in both years of survey, which is similar to findings in other developing countries. As stated by Khanam (2005), one reason for these children is the fact that they may be from very poor households and the households do not have much land or other productive resources to employ them. Thus, limited resources in the household to cover the costs of education have pulled out the children from school and stay at home. One other reason could be that the parents are illiterate and who do not understand the value of education well, so they keep the children at home to help them instead of sending them to school. There is no significant effect of age on the probability of "school and work" and the probability of "neither work nor school" among Mexican children as found by Levison et al. (2001).

Table 5-11 and 5-14 confirm that if a child is the son or daughter of the head of household, he or she is less likely to "school and work" and "work only", but more likely to be "idle" children. The coefficient shows a significant and positive effect on the probability of "neither work nor school", indicating that the son or daughter of the household head is also likely to be in "idle" category as opposed to the children of other relatives of the household head. For poor families, the above reasons might be one of the causes of this finding. For rich families, households with land are able to hire labour instead of their household members. In addition, since there is no compulsion for children to go to school in rich families and at the same time, the households did not face credit constraints, children are left at home, doing "neither work nor school".

The gender coefficient shows a significant effect on the probability of "work only", the probability of "school and work" and the probability that a child will "neither work nor school". Girls are 0.8 percentage point less likely to "school and work" in 2005 and the coefficient increases to 1.8 percentage points in 2007. Similar relationships are found on the effects of child's gender on the probability of "work only" and on the probability of "neither work nor school".

5.6.2 Head of Household and Spouse Characteristics

Age of the head of the household significantly reduces the probability of "work only" in both years of the survey. The effect of age on the probability of "work and school" is found to be significant in 2007, while the effect of age on the probability of "neither work nor school" is found to be significant in 2005. Psacharopolous (1997) finds that the probability of working among children in Bolivia is higher among female-headed households than male-headed households (see also Mario, 2009). Ray (2000) also notes that female-headed households are more vulnerable to poverty and much more dependent on children's earnings. The coefficient of female headed households in our estimates shows a significant effect in 2005, but not in 2007. Particularly, the child is less likely to be in "work and school" category by 4.4 percentage points. However, households headed by female tend to increase the probability of "work only" and the probability of "neither work nor school". Girls are more likely to "work only" in our gender boys-girls estimates (Table 5-4). In urban-rural divide samples, the significant impact of female headed is on the probability of "work only" and "neither work nor school", where the larger impact is in urban areas compared to in rural areas. Furthermore, region-gender estimates indicate that household headed by female

significantly increases the probability of "work only" and "neither work nor school" relative to "school only" among urban-girls children. The result reflects that working girls and female headship are substitutes.

Among household head and spouse characteristics, their education and the occupation have a significant impact on child activities. As noted by Bonsang and Faye (2005), highly educated parents have more information about the return from schooling therefore; they can help their children in their learning process efficiently which is resulting in lower dropout rate. Consistent with the previous empirical findings, a higher level of education among parents decreases the probability that a school-age child will "work only", "school and work" or do "neither" relative to the probability that the child will attend "school only". In other words, the parental education significantly reduces the probability that a school-age child will be in "work only" category, in "school and work" category and in" neither" category. Therefore, these findings confirm that household heads and spouses with higher level of human capital have better potential income than that of lower educated parents, which higher income parents decreases the chance of the children to be sent to "work only", "school and work" or "neither work nor school" rather than to "school only". Our gender-divide estimates show that boys and girls are less likely to be involved in a working activity and "neither work nor school" as the head of the household and their spouse is more educated. In addition, there are noticeable gender differences between the estimates of this effect (Table 5-3 and Table 5-6).The impact is much larger in rural areas than in urban areas. Specifically, it does highly impact rural boys in both years of the survey (Table 5-5 and Table 5-8).

Some of the coefficients of household head's and spouse's occupation variables show significant results. For example, if household head's occupation is employer, then it is

more likely for the child to specialise in "study and work" and "work only". In contrast, children are less likely to be in neither category. On the other hand, if the household head of a child is a casual worker, then it increases the probability that the child will "neither work nor school". In addition, the child is 0.8 percentage point less likely to "work only" in 2005 and the coefficient reduced by 0.1 point in 2007 relative to the reference category (household head's occupation is self-employed).

The coefficient of spouse's occupation is found to be significant and positively associated with the probability of "work only" in 2005 and 2007. The child is 1 percentage point less likely to combine work and school in 2005 if the spouse of household head is an employee relative to the spouse's occupation is self-employed. This coefficient is not significant in 2007. In contrast, if the spouse of a household head is an employee, then it reduces the probability that the child will "neither work nor school" by 1.1 percentage points in 2007.

5.6.3 Household Characteristics

Household income is predicted to have a positive impact on schooling, since in the presence of credit constraints; poorer households may have hard access to credit market to enable them to support both direct and opportunity costs of education (Guarcello et al, 2004). We have included variable that reflects the poverty status of the children's household, which is the total household income minus children income. This variable (as suggested by Basu-Van Luxury Axiom) is predicted to have a positive impact on schooling, since in the presence of credit constraints, poorer households lack the resources in order to support both direct and opportunity costs of education (Bonsang

and Faye, 2005). In addition, poorer households may send their children to work to earn extra income to make ends meet. Our results confirm this prediction. Estimates show a significant effect on the probability of work in 2005, but no significant effect on the probability of "school and work" and "neither work nor school". In 2007, higher household income is significantly associated with a higher probability to "school and work" and a lower probability to "work only" and "neither work nor school" relative to the probability of "school only". However, these results may show a moderate income impacts. This is due to the fact that we have included several variables which reflecting the quality of the living conditions of the household that may be positively correlated to household income. According to Bonsang and Faye (2005), this automatically weakens the household income impact on child activities. Moreover, a large part of working children live in an agricultural family in rural areas that it is difficult to evaluate the contribution of each child to household income, especially those children who help their parents. Consequently, endogeneity issue can downward bias impact of household income on the probability of working for children. Estimates show that, for boys and girls, the probability to work decreases significantly as household income increases in 2005 and 2007. No significant impact is observed of household income on the probability of "school and work" and "neither work nor school" in 2005. However, a significant result is shown in 2007 with a large impact on boys compared to girls (Table 5-6), in rural areas compared to urban areas (Table 5-7). The square of household income shows that the probability of "work only" and "neither work nor school" decreases with an increasing rate. However, the effect of household income (squared) on the probability of "school and work" is not significant.

Emerson and Souza (2008), in their study of child labour in Brazil, noted that the higher abilities commanded by earlier born children may enable them to command higher

wages in the labour market than their later born siblings. In addition, in the case of families that cannot afford schooling for their earlier born children, they may send the later born children to school due to the income earned by their older siblings. Our result confirms this finding where the probability of "school and work" increase as the child gets older and a similar result also shown on the probability of "work only". These results are found significant in both 2005 and 2007. Moreover, the older the child, the more likely they will be in "neither work nor school" category by 0.4 percentage point and this coefficient is significant in 2007. As a study by Grootaert (1998) in Cote d'Ivoire shows that the presence of siblings within a household influences children and whether they are likely to be in the labour market or in school (see also Patrinos and Psacharopolous, 1997 and Togunde and Richardson, 2006). In addition, as noted by Ray (2001, pg. 10), a child living in a household containing a large number of children is more likely to be living in poverty than a child residing in a household with a few children. Our result indicates that an upsurge in the number of school-age children increases the probability of "work only", which is shown to be significant in both years of survey. However, it has no effect on the probability of "work and school" and "neither work nor school" in 2005 and 2005. The only significant effect can be observed by an increase in the number of children aged 15-17 in the household. In particular, an increase in the number of children with the age of 15-17 years is negatively related to the probability of "work and school" and the probability of "work only". In contrast, it is positively related to the probability of "neither work nor school" as opposed to the probability of "school only". A naïve prediction which stated by Bonsang and Faye (2005), number of adults in the household would have a positive impact on the probability for children to attend school. This is due to the fact that more adults presence in the household are accountable to take care of young children and able to

provide sufficient resources to the household. Our estimates indicate that the number of adults significantly reduces the probability of "school and work" and the probability of "work only". Furthermore, the child is more likely to be "idle" as the number of adult increases. These results suggest thus labour complementarities between adults and children. Furthermore, living in rural areas positively associated with the probability of "school and work", "work only" and "neither work nor school". The largest is the probability of "school and work" relative to the probability of "school only". These coefficients are significant in 2005 and 2007.

In Indonesia, computers still remain a luxury in many schools and households. Only about 21% of junior high schools and 37% of high schools had computer facilities in 2010[6]. As in Bezile, Young (2002) notes that students in urban schools have to pay higher fees than those in rural areas since urban schools provide more services such as typing, computer and security. In addition, the public ICT literacy in Indonesia is still very low including students and teachers, especially those who live in the perimeters or remote areas (Yuhetty, 2002). Therefore, having a computer in a household shows a high financial ability to send children to school and the child is less likely to work. Our estimates in 2005 show having computer in the household significantly reduces the probability of "neither work nor school" by 0.8 percentage point relative to the probability of "school only" and a similar effect also shown on the probability of "neither work nor school" in 2007. It has no significant effects on the probability of "school and work" and the probability of "work only" in 2005. In contrast, having a computer in the household is significantly related to the higher probability of "work and school".

[6]Computers for Schools: Why Invest in Computers for Schools. Retrieved February 10, 2014 from http://www.indonesiandiasporafoundation.org/read-why-invest-in-computers-for-schools.html

Land Ownership

As found by Khanam (2006), there were weak effects of total land area on the probability of neither work nor school and raises the probability of combining work and school. Our result shows that households that privately owned paddy land are positively associated with the probability of "neither work nor school" (Table 5-3). Since an additional amount of land tends to demand more labour that might requires school-age children to be involved in farm work, because land and labour are complementary (Khanam, 2005). A negative effect was found on the probability of "work only" in 2005 (Table 5-3). Moreover, children were 0.7 percentage point less likely to be in neither work nor school category if the household privately owned paddy land.

In addition, land ownership has a significant impact on boy's sample, but no significant impact on girl's sample (Table 5-3).The reason is girls are less likely than boys to do agricultural activities along with study. In particular, an increase of 1 hectare of paddy land is associated with a lower probability to "work only" and a higher probability of "neither work nor school". Moreover, the child is 0.9 percentage point less likely to be in "neither work nor school" category as the size of dry land increases by 1 hectare. In urban areas (Table 5-4), an increase in the total paddy land increases the probability of "work and school". A similar effect is shown on the probability of "school and work" in rural areas if the total paddy land increases. Furthermore, it also decreases the risk of being in "work only" category for children in rural areas. The effect of total land area (paddy and dry land) owned by the household also exhibit a significant effect on child labour and schooling decision in urban-girls' sample and rural-boys' sample. However, there is no significant impact of the privately owned land but managed by others in

pooled or other samples. These results have ruled out the weak link between land ownership and child status.

5.6.4 Community Characteristics

As findings by Maitra and Ray (2002) indicate, the improvements of the facilities inspire working and 'idle' children to combine work and school in Pakistan. The children's time allocation depends on the access to basic services such as water and electricity (Bonsang and Faye, 2005). Having these services in the household reduces the opportunity cost of schooling as children are free from the responsibility to fetching water and collecting wood for cooking or lighting. These facilities help in reducing child labour and increasing school attendance. Based on the study by Guarcello et al (2004), their finding shows households that have access to water and electricity are more likely to send their children to school. Maitra and Ray (2002) found that the provision of improved electricity facility in Peru encourages schooling and the provision of improved water supply facility encourages children to combine schooling and working.

SUSENAS does not contain information of basic services directly; however, it is possible to construct a proxy variable that reflects the degree of development of the infrastructure in the household in each of province. Guarcello et al. (2004) found that having access to water increases the number of children attending school and decreases the number of children in working or in neither work nor school category. Based on a study by Bonsang and Faye (2005) in Senegal, they construct a variable that indicates the proportion of households having those basic services by district of census. Thus, we

also construct these variables to investigate the impact of the development of the infrastructures in the areas where household live. This infrastructure proxy does not show much significant effects in 2005 (Table 5-3). However, in 2007, having an access to water and improved sanitation significantly increases the probability of "school and work" relative to the "school only" (Table 5-6). The child is less likely to "work only" if the household own the dwelling, having an improved sanitation and having an electric. In addition, owning the dwelling and having a direct access to water has a negative impact on the probability of "neither work nor school". Results also indicate that the presence electric lighting significantly increases the probability of "neither work nor school" in 2007. This result is similar to what was found in Ghana by study of Guarcello et al (2004). It is observed that the size of the effects in rural areas is generally larger than in urban areas (Table 5-7). No significant impact of number of schools provided on child status in both years of the survey.

A high student-teacher ratio negatively impacts the probability of "work only" relative to the "school only". The result indicates that an increase in the student-teacher ratio shows underfunded schools, which need more funding for education. This makes the children more likely to drop out of school and be in the 'work only' category. The increase in gross regional domestic product (GRDP) showed similar effects to household income, which significantly decreases the probability of "school and work", "work only" and "neither work nor school" as opposed to "school only". Having a basic services and infrastructures and improvement of the availability of schools, teachers, and regional economic status highly affect those children in rural areas, especially boys. Our region estimates shows a significant and negative impacts on all given probabilities relative to "school only" in 2005 and 2007.

5.7 Conclusion

This chapter was an attempt to provide an understanding on why an Indonesian child is doing one activity and not another one. This has been the principal motivation of this chapter. Apart from that, this chapter further analyses the determinant of the possible child's activity instead of working and schooling. Households are assumed to maximize their utility by making decisions about time allocation for their children among four different activities: school only, work and school, work only, and neither work nor school. Using data from The National Socioeconomic Survey (SUSENAS) in Indonesia, we test the impact of child, household and community characteristics along with basic services and infrastructures on children outcomes. We observe that having basic services significantly affects the probability of combining work and school, work only and neither work nor schooling. However, no significant impact is observed on the probability of children attending school in both years of the survey.

A result of this chapter it is worth emphasizing that an increase in household income and GRDP, increase in the size of land ownership, owning a dwelling and having a direct access to water reduces the child's probability to be in neither work nor school category. It is interesting to look at the effects of access to basic services by age. The effects of basic services are higher for relatively young children and relatively old children. This seems to specify that availability of water; sanitation and electricity help to increase school and work at younger ages and may reduce dropout rate at later ages. The negative effect of these basic services has on the participation of children in working tends to be higher for relatively older children. In addition, "idle" children seem to particularly benefit from having access to basic services at a young and later age. The increase in schooling seems consequently to be due to children being

withdrawn from work or from being in neither work nor school category. On the other hand, access to basic services appears to help reduce the possibility to drop out from school and join the labour market.

Furthermore, children living in households that is headed by female are more likely to devote most of their time to work and being "idle' especially for girls, which reflects that working girls are substitute of adult female. We also observe that household head and spouse background has a significant impact on children's status. As findings in previous chapters, children in a household where the head and the head's spouse has a relatively high level of education are less likely to work and more likely to attend school. In this chapter, our estimates show that better educated household head and the spouse reduces the probability of children to combine work and schooling and be in neither work nor school category. This impact is likely to support the argument of the importance of adult education on children outcomes. Therefore, educating the adults in the household could be useful in improving children outcomes.

The results represent the factors influencing the incidence of child labour along with other activities, thus limiting our study only on the supply side of the determinants of child's activity. However, our chapter does not cover the demand side of child's activity in Indonesia. In addition, our investigation also did not cover all the possibilities that might influence the household's decision on child's activity such as migration, trade, weather, and capital market. Therefore, further analysis is required to examine these effects.

However, these findings have important implications for current and future efforts to reduce the probability of working and increase their participation in school. Since there is evidence that working is common among older children, older children who cannot

continue with secondary school should be targeted by policy makers. In addition, older girls who are dropped out from schooling due to early marriage should be considered, as well. For children of less educated and poor parents, they need more attention as they cannot afford schooling compared to other families. However, the main initiatives that have to be focused are to improve the welfare of the rural communities. For example, access to basic services can influence and modify the decision of the household regarding children activities through "price" and income effect. In particular, according to Bonsang and Faye (2005), easier access to the basic services including water, sanitation and electricity might reduce the value of children's time in supplement the household income as opposed to investment in human capital accumulation. Moreover, the value of children's time might be affected indirectly by access to basic services, which might produce a positive income effect that reduces the value of children's time in contributing to current income. Therefore, providing these basic services should be the priority in reducing child labour, especially in rural areas.

Moreover, policy makers should target the availability of teachers where school enrolment is low. Appropriate policies are needed, such as subsidy programs for those children who are combining school and work, since they are more likely to end up only working or be 'idle' children. Therefore, policies ought to shift children who are combining school and work toward full-time schooling. Hence, the availability of good schools, reinforced adult educational levels, and appropriate subsidy programs will help curb the prevalence of child labour and improve the probability that children stay in school. Thus, government agencies together with communities, non-government organizations and international organizations have to work together to overcome the problem.

Table 5-1: Percentages of Prediction for Each Child Use Categories, SUSENAS 2005.

Category	Predicted (%)				Total (n)
	School Only	School and Work	Work Only	Neither	
Actual					
School Only	80.0	15.0	2.0	3.0	132,402
School and Work	28.5	65.0	4.5	2.0	4,105
Work Only	28.5	56.0	13.0	2.5	11,557
Neither work nor School	65.5	17.5	2.0	15.0	6,745
Total (n)	**114,804**	**30,180**	**4,470**	**5,355**	**154,809**

Notes:
Percentages are given by the ration of number predicted in the category over total actual number which is calculated using expected percent correctly predicted (ePCP) which was proposed by Herron (1999). The percent correctly predicted simply gives what percentage of observations that we got right. For example, for the category "School Only" for example, percentage of correct prediction is 80% (105,922/132402), and the row total should be equal to 100%.
The concept is comparing the model to the null model (without variables (only intercepts) and this model will not explain anything and it will simply reproduce the marginal observed probabilities in the dataset. So, PCP - the null model will predict only the number of cases in the modal category right .In fact, the null model will predict everyone in the modal category as that is the way that it gets the most possible cases right for sure.
Percentage of correct predictions of child utilization categories = 85.64%

Table 5-2: Percentages of Prediction for Each Child Use Categories, SUSENAS 2007.

Category	Predicted (%)				Total (n)
	School Only	School and Work	Work Only	Neither	
Actual					
School Only	83.9	5.7	5.5	4.9	128,150
School and Work	42.5	31.8	21.4	4.3	9,401
Work Only	32.1	15.4	43.1	9.4	10,071
Neither work nor School	29.3	0.0	20.7	50.0	7,807
Total (n)	**127,451**	**9,498**	**10,571**	**7,807**	**155,327**

Notes:
Percentages are given by the ration of number predicted in the category over total actual number which is calculated using expected percent correctly predicted (ePCP) which was proposed by Herron (1999). The percent correctly predicted simply gives what percentage of observations that we got right. For example, for the category "School Only" for example, percentage of correct prediction is 83.9% (107518/149615), and the row total should be equal to 100%.
The concept is comparing the model to the null model (without variables (only intercepts) and this model will not explain anything and it will simply reproduce the marginal observed probabilities in the dataset. So, PCP - the null model will predict only the number of cases in the modal category right .In fact, the null model will predict everyone in the modal category as that is the way that it gets the most possible cases right for sure.
Percentage of correct predictions of child utilization categories = 82.50%

Table 5-3: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2005.

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Age Groups									
10 to 12 years	-0.0066*	-0.1098*	-0.0411*	-0.0059*	-0.1316*	-0.0374*	-0.0069*	-0.0815*	-0.0454
	(0.0012)	(0.0036)	(0.0018)	(0.0018)	(0.0053)	(0.0026)	(0.0016)	(0.0046)	(0.0026)
15 to 17 years	0.0078*	0.0906*	0.0167*	0.0089*	0.1062*	0.0168*	0.0060*	0.0705*	0.0168*
	(0.0010)	(0.0017)	(0.0012)	(0.0015)	(0.0025)	(0.0017)	(0.0013)	(0.0022)	(0.0017)
Child Characteristics									
Girls									
	-0.0084*	-0.0336*	-0.0038*	-	-	-	-	-	-
Biological Child	(0.0008)	(0.0012)	(0.0010)						
	-0.0097*	-0.0563	-0.0091*	-0.0049**	-0.0369*	-0.0106*	-0.0132*	-0.0618*	-0.0076*
Household Head's Characteristics	(0.0016)	(0.0021)	(0.0020)	(0.0025)	(0.0035)	(0.0029)	(0.0019)	(0.0023)	(0.0029)
Age									
	0.0001	-0.0007*	-0.0002*	0.0003*	-0.0005*	-0.0001	-0.0001***	-0.0008*	-0.0004*
Female Headed	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
	-0.0435***	0.0345**	0.0294**	-0.3886	0.0935	0.0521	-0.0264	0.0386**	0.0267
Household Head's Education	(0.0255)	(0.0162)	(0.0119)	(0.4337)	(2.5348)	(0.9040)	(0.0213)	(0.0183)	(0.0178)
Completed Primary									
	-0.0076*	-0.0222*	-0.0070*	-0.0083*	-0.0249*	-0.0063**	-0.0066*	-0.0196*	-0.0075*
Junior Secondary	(0.0016)	(0.0022)	(0.0019)	(0.0023)	(0.0033)	(0.0027)	(0.0022)	(0.0029)	(0.0027)
	-0.0052*	-0.0637*	-0.0256*	-0.0062**	-0.0720*	-0.0264*	-0.0039	-0.0532	-0.0247*
Senior Secondary	(0.0019)	(0.0029)	(0.0025)	(0.0027)	(0.0043)	(0.0035)	(0.0026)	(0.0038)	(0.0035)
	-0.0050**	-0.0815*	-0.0329*	-0.0051***	-0.0985*	-0.0309*	-0.0045	-0.0608*	-0.0353*
Tertiary Education	(0.0021)	(0.0035)	(0.0029)	(0.0030)	(0.0053)	(0.0041)	(0.0028)	(0.0044)	(0.0041)
	-0.0086**	-0.0672*	-0.0390*	-0.0120**	-0.1382*	-0.0354*	-0.0039	-0.0399*	-0.0362*
Household Head's Employment	(0.0033)	(0.0054)	(0.0049)	(0.0054)	(0.0120)	(0.0072)	(0.0040)	(0.0058)	(0.0066)
Employer									
	0.0097*	0.0186*	-0.0054*	0.0132*	0.0258*	-0.0068*	0.0052*	0.0076*	-0.0035***
	(0.0012)	(0.0016)	(0.0014)	(0.0017)	(0.0024)	(0.0020)	(0.0015)	(0.0021)	(0.0019)
Employee	-0.0015	-0.0082*	-0.0009	-0.0007	-0.0047	-0.0020	-0.0019	-0.0098*	0.0003
	(0.0018)	(0.0024)	(0.0019)	(0.0027)	(0.0037)	(0.0027)	(0.0022)	(0.0028)	(0.0027)

Table 5-3: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Casual Worker	0.0041**	0.0118*	0.0058*	0.0044	0.0197*	0.0065**	0.0035	0.0028	0.0053**
	(0.0020)	(0.0025)	(0.0019)	(0.0030)	(0.0037)	(0.0027)	(0.0025)	(0.0032)	(0.0026)
Unpaid Worker	0.0192*	0.0130***	-0.0011	0.0224*	0.0205**	0.0011	0.0159*	0.0028	-0.0032
	(0.0033)	(0.0068)	(0.0061)	(0.0051)	(0.0103)	(0.0085)	(0.0042)	(0.0086)	(0.0089)
Others	0.0062**	0.0122*	0.0035	0.0071***	0.0191*	0.0028	0.0058***	0.0057	0.0037
	(0.0024)	(0.0032)	(0.0027)	(0.0037)	(0.0049)	(0.0037)	(0.0030)	(0.0040)	(0.0038)
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0042*	-0.0182*	-0.0121*	-0.0035***	-0.0194*	-0.0102*	-0.0050**	-0.0166*	-0.0141*
	(0.0014)	(0.0020)	(0.0017)	(0.0021)	(0.0029)	(0.0024)	(0.0020)	(0.0025)	(0.0024)
Junior Secondary	-0.0009	-0.0567*	-0.0346*	0.0012	-0.0654*	-0.0336*	-0.0033	-0.0454*	-0.0356*
	(0.0018)	(0.0030)	(0.0025)	(0.0027)	(0.0044)	(0.0036)	(0.0025)	(0.0038)	(0.0035)
Senior Secondary	-0.0056**	-0.0753*	-0.0417*	-0.0052	-0.0967*	-0.0358*	-0.0056***	-0.0515*	-0.0480*
	(0.0022)	(0.0040)	(0.0033)	(0.0033)	(0.0063)	(0.0045)	(0.0029)	(0.0048)	(0.0047)
Tertiary Education	-0.0058	-0.0470*	-0.0519*	-0.0026	-0.1278*	-0.0471*	-0.0060	-0.0253*	-0.0489*
	(0.0039)	(0.0060)	(0.0062)	(0.0066)	(0.0152)	(0.0094)	(0.0046)	(0.0062)	(0.0082)
Spouse's Employment									
Employer	0.0258*	0.0133*	-0.0078*	0.0231*	0.0069	-0.0094**	0.0272*	0.0185*	-0.0054
	(0.0017)	(0.0030)	(0.0028)	(0.0027)	(0.0047)	(0.0038)	(0.0022)	(0.0036)	(0.0042)
Employee	-0.0096*	0.0094*	0.0034	-0.0125*	0.0114**	-0.0013	-0.0073**	0.0061	0.0098**
	(0.0027)	(0.0035)	(0.0031)	(0.0042)	(0.0056)	(0.0043)	(0.0032)	(0.0040)	(0.0044)
Casual Worker	0.0114*	0.0291*	0.0091*	0.0084**	0.0377*	0.0038	0.0140*	0.0182*	0.0162*
	(0.0026)	(0.0037)	(0.0031)	(0.0040)	(0.0056)	(0.0044)	(0.0032)	(0.0046)	(0.0044)
Unpaid Worker	0.0158*	0.0148*	-0.0031	0.0179*	0.0181*	-0.0081*	0.0137*	0.0115*	0.0034
	(0.0017)	(0.0025)	(0.0022)	(0.0024)	(0.0038)	(0.0031)	(0.0022)	(0.0032)	(0.0033)
Others	-0.0190*	0.0001	0.0085*	-0.0179*	0.0063***	0.0031	-0.0211*	-0.0068**	0.0155*
	(0.0017)	(0.0022)	(0.0018)	(0.0024)	(0.0034)	(0.0025)	(0.0023)	(0.0028)	(0.0028)
Income (Rp.)									
Household Income	0.0009	-0.0244*	0.0009	-0.0002	-0.0226*	0.0070	0.0028	-0.0218*	-0.0056
	0.0031)	(0.0040)	(0.0038)	(0.0053)	(0.0063)	(0.0053)	(0.0034)	(0.0048)	(0.0056)
Square of HH Income	-0.0008	-0.0057*	0.0046**	-0.0018	0.0026	0.0057***	-0.0005	0.0058**	-0.0041
	(0.0018)	(0.0020)	(0.0023)	(0.0034)	(0.0031)	(0.0031)	(0.0017)	(0.0026)	(0.0036)

Table 5-3: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Household Characteristics									
Birth Order	0.0059*	0.0386*	0.0011	0.0063*	0.0499*	-0.0004	0.0055*	0.0263*	0.0030
	(0.0012)	(0.0023)	(0.0017)	(0.0017)	(0.0034)	(0.0023)	(0.0015)	(0.0028)	(0.0024)
Child Aged 0-5 years	-0.0015	-0.0264*	0.0028	-0.0007	-0.0355*	0.0038	-0.0025	-0.0174*	0.0015
	(0.0013)	(0.0025)	(0.0019)	(0.0020)	(0.0037)	(0.0026)	(0.0017)	(0.0031)	(0.0026)
Child Aged 6-9 years	-0.0022	-0.0314*	0.0017	-0.0014	-0.0420*	0.0033	-0.0031***	-0.0199*	-0.0005
	(0.0013)	(0.0025)	(0.0019)	(0.0020)	(0.0037)	(0.0026)	(0.0017)	(0.0031)	(0.0027)
Child Aged 10-14 years	-0.0003	-0.0308*	0.0026	-0.0003	-0.0407*	0.0049**	-0.0003	-0.0198*	0.00003
	(0.0011)	(0.0024)	(0.0017)	(0.0017)	(0.0036)	(0.0023)	(0.0015)	(0.0030)	(0.0024)
Child Aged 15-17 years	-0.0014***	-0.0112*	0.0036*	-0.0020	-0.0148*	0.0055*	-0.0008	-0.0066*	0.0015
	(0.0008)	(0.0016)	(0.0011)	(0.0012)	(0.0024)	(0.0015)	(0.0011)	(0.0020)	(0.0015)
Number of Adults	-0.0022*	-0.0054*	0.0010***	-0.0033*	-0.0075*	0.0005	-0.0008	-0.0031*	0.0015**
	(0.0004)	(0.0006)	(0.0005)	(0.0006)	(0.0009)	(0.0007)	(0.0006)	(0.0008)	(0.0007)
Rural	0.0118*	0.0089*	0.0082*	0.0161*	0.0139*	0.0063*	0.0073*	0.0031	0.0103*
	(0.0012)	(0.0016)	(0.0013)	(0.0019)	(0.0024)	(0.0019)	(0.0015)	(0.0019)	(0.0019)
Land Ownerships									
Privately Owned: Paddy	0.0043	-0.0207*	0.0071***	0.0058	-0.0270**	0.0114**	0.0024	-0.0157	-0.0003
	(0.0026)	(0.0078)	(0.0041)	(0.0036)	(0.0120)	(0.0050)	(0.0043)	(0.0099)	(0.0079)
Privately Owned: Dryland	-0.0008	0.0018	-0.0045	0.0004	-0.0007	-0.0085***	-0.0021	0.0040	-0.0007
	(0.0019)	(0.0027)	(0.0028)	(0.0027)	(0.0042)	(0.0045)	(0.0028)	(0.0032)	(0.0034)
Privately Owned but managed by others (both paddy and dryland)	0.0045	-0.0122	-0.0108	0.0102	-0.0144	0.0001	0.0002	-0.0083	-0.0248
	(0.0053)	(0.0166)	(0.0131)	(0.0075)	(0.0283)	(0.0163)	(0.0085)	(0.0177)	(0.0233)
Community Characteristics									
Dwelling Ownership	-0.0007*	-0.0007*	-0.0004*	-0.0005*	-0.0001	-0.0004**	-0.0009*	-0.0011*	-0.0004**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)
Improved Drinking Water	0.0004*	-0.0002**	-0.0010*	0.0006*	-0.0004*	-0.0009*	0.0003*	0.00001	-0.0010*
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)

Table 5-3: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Number of Schools	0.0048	-0.0019	-0.0118**	0.0052	0.0006	-0.0145***	0.0058	0.0067	-0.0089
	(0.0044)	(0.0065)	(0.0058)	(0.0066)	(0.0098)	(0.0081)	(0.0060)	(0.0084)	(0.0082)
Student-teacher Ratios	0.0047	-0.0002	0.0137**	0.0054	-0.0018	0.0163**	0.0025	-0.0086	0.0109
	(0.0044)	(0.0064)	(0.0057)	(0.0064)	(0.0096)	(0.0080)	(0.0060)	(0.0084)	(0.0080)
GRDP	-0.0002*	-0.0003*	-0.0002*	-0.0002***	-0.0001	-0.0005*	-0.0003*	-0.0004*	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Telephone	-0.0031	0.0013	-0.0075*	-0.0072**	-0.0038	-0.0047	-1.0000	0.0032	-0.0103*
	(0.0019)	(0.0025)	(0.0023)	(0.0031)	(0.0041)	(0.0032)	(0.0023)	(0.0029)	(0.0033)
Computer	0.0039	0.0063	-0.0083***	-0.0006	-0.0002	-0.0144**	0.0060	0.0046	-0.0015
	(0.0037)	(0.0049)	(0.0048)	(0.0066)	(0.0087)	(0.0073)	(0.0041)	(0.0052)	(0.0064)
Island									
Sumatera	-0.0132*	-0.0391*	-0.0132*	-0.0094**	-0.0280*	-0.0135**	-0.0173*	-0.0467*	-0.0135**
	(0.0029)	(0.0044)	(0.0041)	(0.0044)	(0.0068)	(0.0058)	(0.0037)	(0.0053)	(0.0058)
Java	-0.0282*	-0.0178*	0.0061	-0.0303*	-0.0226*	0.0029	-0.0259*	-0.0114***	0.0092
	(0.0035)	(0.0050)	(0.0046)	(0.0054)	(0.0078)	(0.0065)	(0.0046)	(0.0061)	(0.0064)
Lesser Sunda Islands	-0.0045	-0.0136*	-0.0028	-0.0027	-0.0104	-0.0030	-0.0067***	-0.0144**	-0.0038
	(0.0031)	(0.0047)	(0.0044)	(0.0046)	(0.0073)	(0.0062)	(0.0039)	(0.0056)	(0.0062)
Kalimantan	-0.0157*	-0.0182*	0.0002	-0.0161*	-0.0088	-0.0020	-0.0151*	-0.0261*	0.0019
	(0.0029)	(0.0043)	(0.0040)	(0.0044)	(0.0067)	(0.0057)	(0.0036)	(0.0050)	(0.0056)
Sulawesi	-0.0062**	-0.0132*	0.0102**	-0.0011	0.0077	0.0074	-0.0131*	-0.0367*	0.0132**
	(0.0028)	(0.0043)	(0.0040)	(0.0043)	(0.0067)	(0.0056)	(0.0037)	(0.0051)	(0.0056)
Maluku	-0.0301*	-0.0522*	-0.0006	0.0353*	-0.0486*	-0.0041	-0.0245*	-0.0523*	0.0022
	(0.0047)	(0.0059)	(0.0051)	(0.0073)	(0.0091)	(0.0073)	(0.0058)	(0.0071)	(0.0071)
Chi Squared	38168.20 (*d.f* 147)			23597.35 (*d.f* 144)			14521.77 (*d.f* 144)		
Pseudo R-Squared	0.2169			0.2250			0.2079		
Number of Observations	154,809			82,163			72,646		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5-4: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2005.

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Age Groups									
10 to 12 years	-0.0065*	-0.0885*	-0.0283*	-0.0067*	-0.1200*	-0.0476*	-0.0070*	-0.0908*	-0.0274*
	(0.0017)	(0.0066)	(0.0027)	(0.0017)	(0.0045)	(0.0024)	(0.0024)	(0.0091)	(0.0039)
15 to 17 years	0.0081*	0.0688*	0.0101*	0.0072*	0.1009*	0.0201*	0.0087*	0.0736*	0.0126*
	(0.0013)	(0.0027)	(0.0018)	(0.0014)	(0.0022)	(0.0016)	(0.0018)	(0.0039)	(0.0026)
Child Characteristics									
Girls	-0.0005	-0.0117*	-0.0063*	-0.0129*	-0.0460*	-0.0024***	-	-	-
	(0.0010)	(0.0017)	(0.0015)	(0.0012)	(0.0017)	(0.0013)			
Biological Child	-0.0109*	-0.0677*	-0.0099*	-0.0052**	-0.0340*	-0.0072**	-0.0050**	-0.0429*	-0.0100**
	(0.0014)	(0.0024)	(0.0026)	(0.0024)	(0.0032)	(0.0028)	(0.0023)	(0.0040)	(0.0039)
Household Head's Characteristics									
Age	-0.0002**	-0.0009*	-0.0001	0.0002*	-0.0005*	-0.0003*	-0.0001	-0.0009*	0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)
Female Headed	0.0001	0.0429*	0.0327**	-0.4677	0.0774	0.0458*	-0.1556	0.0625	0.0327
	(0.0125)	(0.0165)	(0.0133)	(0.5507)	(0.2595)	(1.2650)	(0.5260)	(1.4021)	(0.6576)
Household Head's Education									
Completed Primary	-0.0032	-0.0161*	-0.0099*	-0.0094*	-0.0238*	-0.0067*	-0.0043	-0.0099***	-0.0096**
	(0.0026)	(0.0041)	(0.0033)	(0.0021)	(0.0028)	(0.0024)	(0.0033)	(0.0057)	(0.0047)
Junior Secondary	-0.0048***	-0.0446*	-0.0259*	-0.0056**	-0.0707*	-0.0263*	-0.0059	-0.0385*	-0.0277*
	(0.0029)	(0.0047)	(0.0039)	(0.0026)	(0.0038)	(0.0033)	(0.0037)	(0.0065)	(0.0056)
Senior Secondary	-0.0071**	-0.0576*	-0.0332*	-0.0030	-0.0956*	-0.0310*	-0.0078**	-0.0563*	-0.0353*
	(0.0029)	(0.0050)	(0.0041)	(0.0028)	(0.0051)	(0.0040)	(0.0038)	(0.0071)	(0.0060)
Tertiary Education	-0.0063***	-0.0452*	-0.0306*	-0.0101***	-0.1084*	-0.0484*	-0.0086***	-0.0920*	-0.0289*
	(0.0035)	(0.0061)	(0.0054)	(0.0054)	(0.0113)	(0.0084)	(0.0049)	(0.0128)	(0.0080)
Household Head's Employment									
Employer	0.0028**	0.0074*	-0.0059**	0.0140*	0.0220*	-0.0050*	0.0056*	0.0140*	-0.0054
	(0.0014)	(0.0026)	(0.0023)	(0.0017)	(0.0021)	(0.0018)	(0.0019)	(0.0037)	(0.0034)
Employee	-0.0036**	-0.0123*	-0.0055**	0.0022	-0.0007	0.0029	-0.0033	-0.0129*	-0.0071**
	(0.0015)	(0.0026)	(0.0022)	(0.0028)	(0.0037)	(0.0029)	(0.0022)	(0.0039)	(0.0033)

Table 5-4: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Casual Worker	0.0009	0.0082**	0.0048***	0.0061**	0.0142*	0.0056**	0.0023	0.0097**	0.0050
	(0.0020)	(0.0033)	(0.0026)	(0.0029)	(0.0034)	(0.0026)	(0.0027)	(0.0046)	(0.0039)
Unpaid Worker	-0.0083	0.0040	-0.0081	0.0305*	0.0171**	0.0018	-0.0035	0.0176	-0.0041
	(0.0053)	(0.0114)	(0.0116)	(0.0045)	(0.0087)	(0.0076)	(0.0067)	(0.0156)	(0.0154)
Others	-0.0011	0.0033	-0.0013	0.0132*	0.0185*	0.0064***	0.0004	0.0105***	-0.0021
	(0.0023)	(0.0038)	(0.0033)	(0.0036)	(0.0047)	(0.0038)	(0.0033)	(0.0056)	(0.0048)
Spouse's Characteristics									
Spouse's Education									
Completed Primary	0.0011	-0.0112*	-0.0108*	-0.0062*	-0.0207*	-0.0133*	0.0022	-0.0146*	-0.0116*
	(0.0023)	(0.0035)	(0.0028)	(0.0019)	(0.0025)	(0.0021)	(0.0031)	(0.0049)	(0.0041)
Junior Secondary	0.0004	-0.0330*	-0.0260*	-0.0006	-0.0692*	-0.0399*	-0.0004	-0.0404*	-0.0287*
	(0.0026)	(0.0044)	(0.0036)	(0.0025)	(0.0041)	(0.0034)	(0.0035)	(0.0060)	(0.0053)
Senior Secondary	-0.0024	-0.0489*	-0.0308*	-0.0040	-0.1011*	-0.0487*	-0.0022	-0.0639*	-0.0297*
	(0.0028)	(0.0049)	(0.0041)	(0.0031)	(0.0067)	(0.0051)	(0.0037)	(0.0072)	(0.0059)
Tertiary Education	-0.0012	-0.0284*	-0.0457*	-0.0047	-0.1050*	-0.0400*	-0.0016	-0.0881*	-0.0453*
	(0.0036)	(0.0063)	(0.0066)	(0.0068)	(0.0139)	(0.0102)	(0.0053)	(0.0144)	(0.0101)
Spouse's Employment									
Employer	0.0219*	0.0114*	-0.0009	0.0258*	0.0130*	-0.0104*	0.0205*	0.0032	-0.0011
	(0.0019)	(0.0043)	(0.0040)	(0.0025)	(0.0040)	(0.0038)	(0.0027)	(0.0067)	(0.0056)
Employee	-0.0018	0.0039	0.0029	-0.0149*	0.0216*	0.0023	0.0001	0.0074	-0.0026
	(0.0022)	(0.0038)	(0.0034)	(0.0043)	(0.0055)	(0.0048)	(0.0033)	(0.0058)	(0.0049)
Casual Worker	0.0096*	0.0215*	0.0039	0.0108*	0.0315*	0.0120*	0.0052	0.0263*	-0.0033
	(0.0030)	(0.0056)	(0.0049)	(0.0037)	(0.0049)	(0.0041)	(0.0045)	(0.0079)	(0.0074)
Unpaid Worker	0.0094*	0.0064	-0.0019	0.0169*	0.0141*	-0.0024	0.0112*	0.0065	-0.0084
	(0.0021)	(0.0043)	(0.0039)	(0.0023)	(0.0033)	(0.0030)	(0.0028)	(0.0062)	(0.0058)
Others	-0.0059*	0.0031	0.0027	-0.0269*	-0.0025	0.0125*	-0.0025	0.0083**	-0.0023
	(0.0017)	(0.0028)	(0.0023)	(0.0024)	(0.0031)	(0.0026)	(0.0023)	(0.0040)	(0.0032)
Income (Rp.)									
Household Income	0.0016	-0.0262*	0.0006	-0.0005	0.0103	0.0065	0.0004	-0.0299*	0.0042
	(0.0023)	(0.0044)	(0.0037)	(0.0058)	(0.0065)	(0.0067)	(0.0037)	(0.0067)	(0.0052)
Square of HH Income	-0.0003	0.0099	-0.0010	-0.0017	0.0033	0.0139*	-0.0005	0.0095*	-0.0014
	(0.0010)	(0.0023)	(0.0018)	(0.0040)	(0.0034)	(0.0050)	(0.0020)	(0.0034)	(0.0023)

Table 5-4: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Household Characteristics									
Birth Order	0.0017	0.0240*	0.0046***	0.0088*	0.0468*	-0.0008	0.0006	0.0323*	0.0045
	(0.0015)	(0.0032)	(0.0024)	(0.0016)	(0.0030)	(0.0022)	(0.0022)	(0.0046)	(0.0035)
Child Aged 0-5 years	0.0008	-0.0118*	0.0005	-0.0036***	-0.0359*	0.0041***	0.0024	-0.0189*	0.0007
	(0.0017)	(0.0034)	(0.0027)	(0.0018)	(0.0033)	(0.0025)	(0.0024)	(0.0050)	(0.0038)
Child Aged 6-9 years	-0.0010	-0.0160*	-0.0006	-0.0037**	-0.0402*	0.0031	0.0002	-0.0225*	0.0014
	(0.0017)	(0.0035)	(0.0027)	(0.0018)	(0.0033)	(0.0025)	(0.0024)	(0.0050)	(0.0039)
Child Aged 10-14	-0.0001	-0.0193*	-0.0021	-0.0010	-0.0367*	0.0052**	0.0013	-0.0261*	-0.0016
years	(0.0015)	(0.0034)	(0.0024)	(0.0016)	(0.0031)	(0.0022)	(0.0022)	(0.0048)	(0.0035)
Child Aged 15-17	-0.0018***	-0.0055**	0.0007	-0.0016	-0.0144*	0.0052*	-0.0018	-0.0052	0.0017
years	(0.0011)	(0.0023)	(0.0016)	(0.0011)	(0.0021)	(0.0014)	(0.0015)	(0.0033)	(0.0023)
Number of Adults	-0.0017*	-0.0022*	0.0002	-0.0024*	-0.0074*	0.0015**	-0.0026*	-0.0033*	-0.0004
	(0.0005)	(0.0008)	(0.0007)	(0.0006)	(0.0008)	(0.0007)	(0.0007)	(0.0012)	(0.0010)
Rural	-	-	-	-	-	-	-	-	-
Land Ownerships									
Privately Owned:	-0.0139	-0.0052	0.0088	0.0064***	-0.0267*	0.0075	-0.0225	-0.0182	-0.0055
Paddy	(0.0138)	(0.0141)	(0.0068)	(0.003)	(0.0098)	(0.0052)	(0.0260)	(0.0308)	(0.0222)
Privately Owned:	0.0057**	-0.0171	0.0034	-0.0023	0.0021	-0.0050	0.0054	-0.0135	-0.0001
Dryland	(0.0027)	(0.0145)	(0.0076)	(0.0027)	(0.0031)	(0.0033)	(0.0055)	(0.0203)	(0.0174)
Privately Owned but	0.0048	0.0055	-0.0396	0.0058	-0.0141	-0.0078	0.0104	0.0495	-0.1549
managed by others	(0.0105)	(0.0313)	(0.0449)	(0.0070)	(0.0206)	(0.0147)	(0.0128)	(0.0521)	(0.1337)
(both paddy and dryland)									
Community Characteristics									
Dwelling Ownership	-0.0001	-0.0005*	-0.0001	-0.0010*	-0.0003	-0.0009*	0.0001	-0.0005**	0.0001
	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0003)	(0.0002)
Improved Drinking	0.0001***	-0.0002**	-0.0009*	0.0006*	-0.0002	-0.0010*	0.0002**	-0.0004**	-0.0011*
Water	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)

Table 5-4: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Number of Schools	-0.0079	-0.0109	-0.0075	0.0115***	0.0048	-0.0206*	-0.0053	-0.0011	-0.0308**
	(0.0057)	(0.0104)	(0.0094)	(0.0063)	(0.0086)	(0.0075)	(0.0077)	(0.0152)	(0.0136)
Student-teacher Ratios	0.0089	0.0107	0.0134	0.0022	-0.0071	0.0199*	0.0052	0.0055	0.0384*
	(0.0057)	(0.0103)	(0.0093)	(0.0062)	(0.0084)	(0.0074)	(0.0077)	(0.0150)	(0.0135)
GRDP	-0.0001	-0.0001	0.0002	-0.0003*	-0.0005*	-0.0004*	-0.0001	-0.0001	0.00004
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)
Telephone	-0.0007	0.0001	-0.0077*	-0.0055	-0.0036	-0.0032	-0.0018	-0.0034	-0.0054***
	(0.0013)	(0.0023)	(0.0022)	(0.0037)	(0.0049)	(0.0041)	(0.0019)	(0.0035)	(0.0031)
Computer	0.0039***	0.0040	-0.0012	-0.0158	-0.0127	-0.0231***	0.0003	0.0031	-0.0027
	(0.0021)	(0.0040)	(0.0040)	(0.0117)	(0.0127)	(0.0118)	(0.0035)	(0.0065)	(0.0059)
Island									
Sumatera	-0.0093***	0.0280**	-0.0102	-0.0163*	-0.0528*	-0.0165*	-0.0125**	0.0089	-0.0282**
	(0.0051)	(0.0132)	(0.0087)	(0.0039)	(0.0055)	(0.0051)	(0.0062)	(0.0165)	(0.0114)
Java	-0.0118**	0.0393*	-0.0129	-0.0388*	-0.0320*	0.0190*	-0.0173**	-0.0001	-0.0372*
	(0.0055)	(0.0135)	(0.0091)	(0.0052)	(0.0066)	(0.0058)	(0.0068)	(0.0172)	(0.0120)
Lesser Sunda Islands	-0.0044	0.0328**	-0.0057	-0.0061	-0.0237*	0.0007	-0.0092	0.0132	-0.0188
	(0.0054)	(0.0136)	(0.0092)	(0.0043)	(0.0059)	(0.0056)	(0.0067)	(0.0173)	(0.0120)
Kalimantan	-0.0092***	0.0409*	-0.0059	-0.0201*	-0.0302*	0.0025	-0.0190*	0.0215	-0.0165
	(0.0052)	(0.0131)	(0.0087)	(0.0039)	(0.0053)	(0.0050)	(0.0065)	(0.0165)	(0.0113)
Sulawesi	-0.0054	0.0397*	0.0105	-0.0083**	-0.0236*	0.0118**	-0.0111***	0.0268	-0.0010
	(0.0050)	(0.0131)	(0.0085)	(0.0040)	(0.0054)	(0.0050)	(0.0061)	(0.0164)	(0.0110)
Maluku	-0.0118***	0.0048	-0.0155	-0.0409*	-0.0670*	0.0027	-0.0304*	-0.0169	-0.0385**
	(0.0065)	(0.0154)	(0.0118)	(0.0066)	(0.0074)	(0.0063)	(0.0106)	(0.0207)	(0.0183)
Chi Squared	9718.23 (*d.f* 144)			27495.09 (*d.f* 144)			5696.87 (*d.f* 141)		
Pseudo R-Squared	0.2187			0.2124			0.2321		
Number of Observations	54,478			100,331			27,946		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5-5 : Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2005.

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Age Groups									
10 to 12 years	-0.0053**	-0.0817*	-0.0293*	-0.0059**	-0.1518*	-0.0423*	-0.0071*	-0.0815*	-0.0540*
	(0.0024)	(0.0093)	(0.0036)	(0.0025)	(0.0068)	(0.0034)	(0.0021)	(0.0055)	(0.0035)
15 to 17 years	0.0069*	0.0594*	0.0076*	0.0087*	0.1227*	0.0187*	0.0049*	0.0741*	0.0221*
	(0.0018)	(0.0036)	(0.0023)	(0.0021)	(0.0032)	(0.0022)	(0.0019)	(0.0028)	(0.0023)
Child Characteristics									
Girls	-	-	-	-	-	-	-	-	-
Biological Child	-0.0138*	-0.0763*	-0.0095*	-0.0038	-0.0261*	-0.0099**	-0.0074**	-0.0390*	-0.0047
	(0.0018)	(0.0029)	(0.0035)	(0.0037)	(0.0051)	(0.0039)	(0.0030)	(0.0036)	(0.0041)
Household Head's Characteristics									
Age	-0.0003*	-0.0008*	-0.0002	0.0004*	-0.0003***	-0.0002	0.0001	-0.0007*	-0.0006*
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0067	0.0502**	0.0407**	-0.4804	0.0900	0.0611	-0.3784	0.0595	0.0156
	(0.0128)	(0.0229)	(0.0168)	(0.5042)	(0.1365)	(0.1477)	(0.4700)	(0.6150)	(0.2431)
Household Head's Education									
Completed Primary	-0.0013	-0.0225*	-0.0109**	-0.0106*	-0.0301*	-0.0062***	-0.0081*	-0.0170*	-0.0070**
	(0.0043)	(0.0057)	(0.0045)	(0.0031)	(0.0042)	(0.0034)	(0.0029)	(0.0034)	(0.0035)
Junior Secondary	-0.0025	-0.0490*	-0.0248*	-0.0071***	-0.0865*	-0.0268*	-0.0039	-0.0527*	-0.0255*
	(0.0046)	(0.0067)	(0.0053)	(0.0038)	(0.0057)	(0.0046)	(0.0034)	(0.0048)	(0.0046)
Senior Secondary	-0.0051	-0.0559*	-0.0315*	-0.0034	-0.1204*	-0.0261*	-0.0024	-0.0666*	-0.0372*
	(0.0047)	(0.0069)	(0.0056)	(0.0042)	(0.0076)	(0.0055)	(0.0038)	(0.0065)	(0.0059)
Tertiary Education	-0.0028	-0.0384*	-0.0276*	-0.0156***	-0.1479*	-0.0541*	-0.0042	-0.0673*	-0.0426*
	(0.0052)	(0.0077)	(0.0073)	(0.0085)	(0.0184)	(0.0127)	(0.0066)	(0.0126)	(0.0112)
Household Head's Employment									
Employer	-0.0004	-0.0012	-0.0065**	0.0180*	0.0313*	-0.0069*	0.0089*	0.0097*	-0.0022
	(0.0021)	(0.0036)	(0.0032)	(0.0024)	(0.0032)	(0.0025)	(0.0021)	(0.0027)	(0.0025)
Employee	-0.0039***	-0.0107*	-0.0038	0.0039	0.0045	0.0021	0.0006	-0.0065	0.0039
	(0.0021)	(0.0034)	(0.0030)	(0.0043)	(0.0057)	(0.0041)	(0.0035)	(0.0045)	(0.0041)
Casual Worker	-0.0005	0.0082***	0.0042	0.0052	0.0257*	0.0063***	0.0066***	0.0002	0.0054
	(0.0030)	(0.0046)	(0.0034)	(0.0044)	(0.0051)	(0.0036)	(0.0036)	(0.0042)	(0.0036)

Table 5-5: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Unpaid Worker	-0.0151***	-0.0101	-0.0147	0.0331*	0.0253***	0.0038	0.0273*	0.0055	0.0008
	(0.0091)	(0.0162)	(0.0187)	(0.0070)	(0.0134)	(0.0105)	(0.0055)	(0.0105)	(0.0111)
Others	-0.0018	-0.0024	-0.0010	0.0136**	0.0240*	0.0054	0.0131*	0.0125**	0.0071
	(0.0033)	(0.0051)	(0.0045)	(0.0054)	(0.0071)	(0.0052)	(0.0045)	(0.0058)	(0.0056)
Spouse's Characteristics									
Spouse's Education									
Completed Primary	0.0001	-0.0067	-0.0103*	-0.0057**	-0.0220*	-0.0106*	-0.0068*	-0.0188*	-0.0164*
	(0.0037)	(0.0051)	(0.0039)	(0.0028)	(0.0037)	(0.0030)	(0.0026)	(0.0030)	(0.0030)
Junior Secondary	0.0013	-0.0220*	-0.0230*	0.0030	-0.0810*	-0.0372*	-0.0048	-0.0550*	-0.0428*
	(0.0040)	(0.0062)	(0.0049)	(0.0037)	(0.0061)	(0.0048)	(0.0033)	(0.0052)	(0.0049)
Senior Secondary	-0.0023	-0.0300*	-0.0318*	-0.0039	-0.1203*	-0.0141*	-0.0041	-0.0768*	-0.0582*
	(0.0043)	(0.0067)	(0.0056)	(0.0048)	(0.0101)	(0.0068)	(0.0040)	(0.0085)	(0.0076)
Tertiary Education	0.0001	-0.0090	-0.0414*	0.0027	-0.1480*	-0.0439*	-0.0113	-0.0695*	-0.0347**
	(0.0051)	(0.0078)	(0.0086)	(0.0106)	(0.0254)	(0.0156)	(0.0081)	(0.0142)	(0.0135)
Spouse's Employment									
Employer	0.0232*	0.0170*	-0.0001	0.0222*	0.0071	-0.0123**	0.0276*	0.0179*	-0.0076
	(0.0026)	(0.0054)	(0.0057)	(0.0038)	(0.0063)	(0.0051)	(0.0032)	(0.0047)	(0.0057)
Employee	-0.0036	0.0003	0.0092**	-0.0223*	0.0161***	0.0002	-0.0077	0.0236*	0.0056
	(0.0030)	(0.0048)	(0.0047)	(0.0068)	(0.0087)	(0.0064)	(0.0052)	(0.0062)	(0.0073)
Casual Worker	0.0137*	0.0157**	0.0114***	0.0084	0.0416*	0.0068	0.0128*	0.0186*	0.0191*
	(0.0039)	(0.0077)	(0.0065)	(0.0056)	(0.0075)	(0.0057)	(0.0045)	(0.0058)	(0.0059)
Unpaid Worker	0.0080*	0.0080	0.0057	0.0197*	0.0184*	-0.0071***	0.0136*	0.0092**	0.0039
	(0.0030)	(0.0057)	(0.0053)	(0.0034)	(0.0051)	(0.0040)	(0.0030)	(0.0041)	(0.0044)
Others	-0.0092*	-0.0010	0.0085**	-0.0272*	0.0033	0.0067***	-0.0287*	-0.0101*	0.0201*
	(0.0024)	(0.0037)	(0.0034)	(0.0035)	(0.0047)	(0.0035)	(0.0034)	(0.0038)	(0.0040)
Income (Rp.)									
Household Income	0.0033	-0.0203*	-0.0021	-0.0022	0.0039	-0.0172***	0.0019	-0.0149***	-0.0057
	(0.0030)	(0.0057)	(0.0055)	(0.0088)	(0.0101)	(0.0093)	(0.0075)	(0.0078)	(0.0099)
Square of HH Income	-0.0005	0.0076**	-0.0017	-0.0017	0.0079	0.0181*	-0.0017	0.0001	-0.0098
	(0.0012)	(0.0030)	(0.0030)	(0.0059)	(0.0053)	(0.0067)	(0.0053)	(0.0042)	(0.0076)

Table 5-5: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Household Characteristics									
Birth Order	0.0028	0.0160*	0.0045	0.0094*	0.0583*	-0.0032	0.0082*	0.0330*	0.0022
	(0.0022)	(0.0043)	(0.0033)	(0.0024)	(0.0046)	(0.0031)	(0.0021)	(0.0037)	(0.0032)
Child Aged 0-5 years	-0.0009	-0.0059	0.0005	-0.0026	-0.0442*	0.0057***	-0.0048**	-0.0258*	0.0020
	(0.0024)	(0.0047)	(0.0036)	(0.0027)	(0.0050)	(0.0034)	(0.0024)	(0.0040)	(0.0036)
Child Aged 6-9 years	-0.0025	-0.0108**	-0.0025	-0.0026	-0.0511*	0.0048	-0.0051**	-0.0269*	0.0009
	(0.0024)	(0.0047)	(0.0037)	(0.0027)	(0.0050)	(0.0034)	(0.0024)	(0.0040)	(0.0036)
Child Aged 10-14	-0.0014	-0.0122*	-0.0022	-0.0013	-0.0473*	0.0086*	-0.0009	-0.0244*	0.0012
years	(0.0022)	90.0046)	(0.0033)	(0.0023)	(0.0048)	(0.0030)	(0.0020)	(0.0038)	(0.0032)
Child Aged 15-17	-0.00019	-0.0049***	-0.0003	-0.0023	-0.0197*	0.0075*	-0.0009	-0.0075*	0.0025
years	(0.0015)	(0.0030)	(0.0021)	(0.0017)	(0.0032)	(0.0020)	(0.0014)	(0.0025)	(0.0020)
Number of Adults	-0.0009	-0.0013	0.0009	-0.0036*	-0.0097*	0.0011	-0.0009	-0.0045*	0.0019***
	(0.0007)	(0.0011)	(0.0009)	(0.0009)	(0.0013)	(0.0010)	(0.0008)	(0.0011)	(0.0010)
Rural	-	-	-	-	-	-	-	-	-
Land Ownerships									
Privately Owned:	-0.0067	-0.0008	0.0127***	0.0084***	-0.0316**	0.0143**	0.0049	-0.0205	-0.0157
Paddy	(0.0124)	(0.0151)	(0.0076)	(0.0045)	(0.0146)	(0.0056)	(0.0052)	(0.0130)	(0.0140)
Privately Owned:	0.0067***	-0.0268	0.0030	-0.0003	-0.0003	-0.0084***	-0.0054	0.0038	-0.0009
Dryland	(0.0035)	(0.0219)	(0.0079)	(0.0037)	(0.0050)	(0.0050)	(0.0041)	(0.0036)	(0.0041)
Privately Owned but	-0.0360	-0.0430	-0.0054	0.0121	-0.0258	0.0063	0.0035	-0.0035	-0.0302
managed by others	(0.0551)	(0.0756)	(0.0251)	(0.0102)	(0.0370)	(0.0170)	(0.0102)	(0.0196)	(0.0309)
(both paddy and dryland)									
Community Characteristics									
Dwelling Ownership	-0.0002	-0.0004***	-0.0001	-0.0008*	0.0003	-0.0009*	-0.0012*	-0.0011*	-0.0008*
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(00003)	(0.0003)	(0.0002)	(0.0003)	(0.0003)
Improved Drinking	0.00003	-0.0001	-0.0007*	0.0008*	-0.0005**	-0.0009*	0.0005*	0.0001	-0.0012*
Water	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)

Table 5-5: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Number of Schools	-0.0097	0.0004	0.0186	0.0113	-0.0003	-0.0122	0.0132	0.0132	-0.0305*
	(0.0085)	(0.0141)	(0.0129)	(0.0094)	(0.0131)	(0.0105)	(0.0083)	(0.0107)	(0.0109)
Student-teacher Ratios	0.0121	-0.0055	-0.0144	0.0047	-0.0043	0.0107	-0.0024	-0.0121	0.0306*
	(0.0085)	(0.0141)	(0.0127)	(0.0091)	(0.0127)	(0.0103)	(0.0082)	(0.0106)	(0.0107)
GRDP	-0.0001	-0.0001	-0.0003**	-0.0001	-0.0002	-0.0007*	-0.0004*	-0.0008*	-0.0001
	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)
Telephone	0.0003	0.0008	-0.0101*	-0.0096***	-0.0083	-0.0028	-0.0021	0.0011	-0.0036
	(0.0018)	(0.0029)	(0.0030)	(0.0057)	(0.0075)	(0.0057)	(0.0047)	(0.0060)	(0.0058)
Computer	0.0061**	0.0014	0.0005	-0.0025	-0.0148	-0.0648*	-0.0427***	-0.0075	0.0009
	(0.0027)	(0.0048)	(0.0054)	(0.0150)	(0.0208)	(0.0249)	(0.0256)	(0.0141)	(0.0132)
Island									
Sumatera	-0.0055	0.0654**	0.0155	-0.0108***	-0.0363*	-0.0110	-0.0215*	-0.0652*	-0.0249*
	(0.0093)	(0.0253)	(0.0158)	(0.0060)	(0.0086)	(0.0072)	(0.0049)	(0.0064)	(0.0073)
Java	-0.0057	0.0972*	0.0195	-0.0398*	-0.0239**	0.0218*	-0.0362*	-0.0343*	0.0131
	(0.0097)	(0.0257)	(0.0161)	(0.0078)	(0.0102)	(0.0082)	(0.0067)	(0.0080)	(0.0083)
Lesser Sunda Islands	0.0011	0.0726*	0.0128	-0.0017	-0.0155***	0.0019	-0.0105***	-0.0276*	-0.0039
	(0.0097)	(0.0257)	(0.0164)	(0.0065)	(0.0093)	(0.0078)	(0.0055)	(0.0070)	(0.0080)
Kalimantan	0.0012	0.0739*	0.0115	-0.0180*	-0.0146***	0.0009	-0.0219*	-0.0413*	0.0020
	(0.0092)	(0.0253)	(0.0157)	(0.0060)	(0.0084)	(0.0070)	(0.0049)	(0.0061)	(0.0070)
Sulawesi	0.0010	0.0666*	0.0289***	0.0011	0.0065	0.0091	-0.0196*	-0.0533*	0.0126***
	(0.0092)	(0.0252)	(0.0156)	(0.0060)	(0.0085)	(0.0071)	(0.0051)	(0.0064)	(0.0070)
Maluku	0.0035	0.0425	0.0121	-0.0405*	-0.0593*	-0.0001	-0.0399*	-0.0670*	0.0024
	(0.0103)	(0.0271)	(0.0180)	(0.0100)	(0.0115)	(0.0090)	(0.0085)	(0.0087)	(0.0089)
Chi Squared	4575.50 (*d.f* 141)			16646.54 (*d.f* 141)			10114.36 (*d.f* 141)		
Pseudo R-Squared	0.2308			0.2117			0.2041		
Number of Observations	26,406			54,034			46,297		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5-6: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2007.

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Age Groups									
10 to 12 years	-0.0247*	-0.0865*	-0.0322*	-0.0256*	-0.1054*	-0.0330*	-0.0215*	-0.0606*	-0.0314*
	(0.0017)	(0.0029)	(0.0018)	(0.0025)	(0.0044)	(0.0027)	(0.0023)	(0.0037)	(0.0025)
15 to 17 years	0.0180*	0.0779*	0.0311*	0.0161*	0.0921*	0.0329*	0.0183*	0.0585*	0.0294*
	(0.0014)	(0.0016)	(0.0014)	(0.0021)	(0.0023)	(0.0019)	(0.0020)	(0.0021)	(0.0019)
Child Characteristics									
Girls	-0.0184*	-0.0317*	-0.0084*	-	-	-	-	-	-
	(0.0012)	(0.0012)	(0.0011)						
Biological Child	-0.0329*	-0.0346*	0.0047**	-0.0201*	-0.0243*	0.0028	-0.0393*	-0.0381*	0.0070**
	(0.0019)	(0.0019)	(0.0021)	(0.0030)	(0.0031)	(0.0030)	(0.0022)	(0.0021)	(0.0029)
Household Head's Characteristics									
Age	-0.0002*	-0.0004*	-0.00002	-0.0001	-0.0002**	0.0001	-0.0004*	-0.0007*	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.0035	-0.0387	0.0185	-0.0253	-0.0206	0.0122	0.0663	-0.5020	0.0755
	(0.0219)	(0.0284)	(0.0173)	(0.0368)	(0.0367)	(0.0242)	(0.2017)	(0.8019)	(0.1636)
Household Head's Education									
Completed Primary	-0.0089*	-0.0176*	-0.0127*	-0.0110*	-0.0176*	-0.0144*	-0.0052	-0.0182*	-0.0110*
	(0.0025)	(0.0021)	(0.0021)	(0.0035)	(0.0031)	(0.0030)	(0.0036)	(0.0025)	(0.0029)
Junior Secondary	-0.0034	-0.0504*	-0.0286*	-0.0049	-0.0581*	-0.0299*	0.0003	-0.0401*	-0.0275*
	(0.0028)	(0.0027)	(0.0026)	(0.0040)	(0.0040)	(0.0037)	(0.0040)	(0.0034)	(0.0036)
Senior Secondary	-0.0059**	-0.0709*	-0.0317*	-0.0060	-0.0854*	-0.0375*	-0.0032	-0.0522*	-0.0255*
	(0.0030)	(0.0032)	(0.0028)	(0.0043)	(0.0048)	(0.0041)	(0.0042)	(0.0039)	(0.0038)
Tertiary Education	0.0011	-0.0737*	-0.0434*	0.0011	-0.1310*	-0.0400*	0.0046	-0.0456*	-0.0409*
	(0.0041)	(0.0057)	(0.0050)	(0.0065)	(0.0124)	(0.0073)	(0.0052)	(0.0058)	(0.0067)
Household Head's Employment									
Employer	0.0285*	0.0068*	-0.0182*	0.0355*	0.0080*	-0.0227*	0.0173*	0.0007	-0.0126*
	(0.0021)	(0.0020)	(0.0018)	(0.0031)	(0.0030)	(0.0025)	(0.0027)	(0.0024)	(0.0024)
Employee	-0.0016	-0.0067*	0.0034**	0.0007	0.0124*	0.0027	-0.0041	0.0002	0.0039***
	(0.0022)	(0.0020)	(0.0015)	(0.0033)	(0.0029)	(0.0022)	(0.0029)	(0.0024)	(0.0021)

Table 5-6: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Casual Worker	0.0197*	0.0079	0.0067***	0.0254*	0.0087	0.0108**	0.0129***	0.0042	0.0013
	(0.0056)	(0.0051)	(0.0039)	(0.0081)	(0.0076)	(0.0054)	(0.0076)	(0.0063)	(0.0057)
Unpaid Worker	0.0295*	0.0031	-0.0145*	0.0318*	0.0056	-0.0283*	0.0235*	-0.0033	-0.0001
	(0.0047)	(0.0053)	(0.0053)	(0.0071)	(0.0080)	(0.0083)	(0.0060)	(0.0065)	(0.0066)
Others	0.0143*	0.0097*	0.0025	0.0178*	0.0054	0.0035	0.0099***	0.0112*	0.0011
	(0.0040)	(0.0035)	(0.0029)	(0.0060)	(0.0055)	(0.0041)	(0.0051)	(00040)	(0.0041)
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0085*	-0.0236*	-0.0085*	-0.0071**	-0.0281*	-0.0054**	-0.0100*	-0.0175*	-0.0123*
	(0.0021)	(0.0018)	(0.0018)	(0.0030)	(0.0027)	(0.0026)	(0.0030)	(0.0023)	(0.0025)
Junior Secondary	-0.0053**	-0.0580*	-0.0272*	-0.0040	-0.0651*	-0.0239*	-0.0060***	-0.0479*	-0.0315*
	(0.0026)	(0.0027)	(0.0025)	(0.0038)	(0.0040)	(0.0036)	(0.0036)	(0.0035)	(0.0035)
Senior Secondary	-0.0063**	-0.0771*	-0.0361*	-0.0036	-0.0870*	-0.0352*	-0.0075***	-0.0609*	-0.0374*
	(0.0029)	(0.0036)	(0.0031)	(0.0043)	(0.0054)	(0.0045)	(0.0039)	(0.0044)	(0.0042)
Tertiary Education	-0.0050	-0.0648*	-0.0435*	-0.0068	-0.1084*	-0.0422*	-0.0035	-0.0521*	-0.0398*
	(0.0046)	(0.0062)	(0.0060)	(0.0078)	(0.0142)	(0.0092)	(0.0055)	(0.0062)	(0.0076)
Spouse's Employment									
Employer	0.0716*	0.0130*	-0.0188*	0.0607*	0.0080***	-0.0243*	0.0787*	0.0163*	-0.0122*
	(0.0028)	(0.0029)	(0.0028)	(0.0041)	(0.0044)	(0.0039)	(0.0038)	(0.0034)	(0.0039)
Employee	-0.0057	0.0190*	0.0058**	-0.0107**	0.0142*	0.0047	0.0001	0.0201*	0.0083**
	(0.0035)	(0.0031)	(0.0025)	(0.0052)	(0.0048)	(0.0036)	(0.0045)	(0.0035)	(0.0036)
Casual Worker	0.0179**	0.0274*	-0.0017	0.0208***	0.0369*	-0.0066	0.0106	0.0145***	0.0043
	(0.0080)	(0.0065)	(0.0059)	(0.0111)	(0.0098)	(0.0084)	(0.0118)	(0.0080)	(0.0083)
Unpaid Worker	0.0424*	0.0153*	-0.0100*	0.0385*	0.0128*	-0.0155*	0.0458*	0.0168*	-0.0032
	(0.0028)	(0.0026)	(0.0023)	(0.0039)	(0.0038)	(0.0032)	(0.0038)	(0.0032)	(0.0033)
Others	-0.0297*	-0.0071*	0.0064*	-0.0309*	-0.0070***	0.0020	-0.0334*	-0.0092*	0.0123*
	(0.0028)	(0.0024)	(0.0020)	(0.0040)	(0.0037)	(0.0028)	(0.0041)	(0.0030)	(0.0028)
Income (Rp.)									
Household Income	0.0032*	-0.0105*	-0.0110*	0.0004	-0.0188*	-0.0119*	0.0050*	-0.0038*	-0.0099*
	(0.0009)	(0.0011)	(00010)	(0.0016)	(0.0020)	(0.0014)	(0.0009)	(0.0011)	(0.0013)
Square of HH Income	0.0001	0.0003*	0.0003*	0.0001	0.0006*	0.0003*	-0.00003	0.0001*	0.0002*
	(0.00004)	(0.00004)	(0.00004)	(0.0001)	(0.0001)	(0.0001)	(0.00003)	(0.00003)	(0.00005)

Table 5-6: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Household Characteristics									
Birth Order	0.0047*	0.0331*	0.0038**	0.0054**	0.0456*	0.0004	0.0034	0.0181*	0.0080*
	(0.0017)	(0.0021)	(0.0017)	(0.0024)	(0.0031)	(0.0024)	(0.0022)	(0.0025)	(0.0024)
Child Aged 0-5 years	-0.0001	-0.0190*	0.0023	-0.0019	-0.0285*	0.0072*	0.0015	-0.0082*	-0.0035
	(0.0019)	(0.0022)	(0.0019)	(0.0027)	(0.0034)	(0.0027)	(0.0025)	(0.0027)	(0.0027)
Child Aged 6-9 years	0.0004	-0.0253*	0.0012	-0.0003	-0.0357*	0.0044	0.0014	-0.0126*	-0.0028
	(0.0019)	(0.0023)	(0.0019)	(0.0028)	(0.0034)	(0.0027)	(0.0025)	(0.0028)	(0.0027)
Child Aged 10-14	-0.0001	-0.0242*	0.0033***	0.0009	-0.0343*	0.0079*	-0.0008	-0.0116*	-0.0022
years	(0.0016)	(0.0022)	(0.0017)	(0.0023)	(0.0033)	(0.0024)	(0.0021)	(0.0026)	(0.0024)
Child Aged 15-17	-0.0015	-0.0086*	0.0041*	-0.0019	-0.0136*	0.0074*	-0.0010	-0.0031***	0.0001
years	(0.0011)	(0.0014)	(0.0011)	(0.0017)	(0.0022)	(0.0016)	(0.0015)	(0.0017)	(0.0016)
Number of Adults	-0.0075	-0.0031*	0.0053*	-0.0079*	-0.0029*	0.0071*	-0.0064*	-0.0025*	0.0032*
	(0.0006)	(0.0006)	(0.0005)	(0.0009)	(0.0009)	(0.0008)	(0.0008)	(0.0007)	(0.0007)
Rural	0.0170*	0.0105*	0.0049*	0.0216*	0.0187*	0.0029	0.0104*	0.0008	0.0071*
	(0.0017)	(0.0016)	(0.0013)	(0.0025)	(0.0025)	(0.0019)	(0.0022)	(0.0019)	(0.0019)
Community Characteristics									
Dwelling Ownership	-0.0004*	-0.0003**	-0.0006*	0.0001	0.0034***	-0.0005*	-0.0008*	-0.0008*	-0.0007*
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Improved Drinking	0.0003**	-0.0001	-0.0004*	0.0004**	-0.0002	-0.0004*	0.0001	0.0001	-0.0003**
Water	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0001)	(0.0001)
Improved Sanitation	0.0017*	0.0007*	-0.00002	0.0017*	0.0004**	0.0001	0.0015*	0.0007*	-0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Source of Electricity	-0.0008*	-0.0006*	0.0002***	-0.0007*	-0.0005*	0.0001	-0.0006*	-0.0006*	0.0003***
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Number of Schools	0.0035	0.0089	0.0024	0.0064	0.0464*	-0.0069	0.0080	-0.0294*	0.0127
	(0.0084)	(0.0081)	(0.0076)	(0.0123)	(0.0120)	(0.0108)	(0.0114)	(0.0105)	(0.0107)
Student-teacher Ratios	0.0115	0.0126***	-0.0034	0.0092	-0.0499*	0.0051	0.0073	0.0278*	-0.0127
	(0.0079)	(0.0076)	(0.0072)	(0.0114)	(0.0112)	(0.0102)	(0.0108)	(0.0100)	(0.0101)
GRDP	-0.0009*	-0.0003*	-0.0003*	-0.0009*	0.00003	-0.0004*	-0.0009*	-0.0007*	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)

Table 5-6: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Telephone	0.00004	-0.0149*	-0.0219*	-0.0096**	-0.0412*	-0.0217*	0.0072**	-0.0009	-0.0192*
	(0.0025)	(0.0032)	(0.0029)	(0.0043)	(0.0060)	(0.0043)	(0.0030)	(0.0033)	(0.0038)
Computer	0.0151*	-0.0066	-0.0167*	0.0107***	-0.0701*	-0.0157**	0.0173*	0.0061	-0.0100***
	(0.0034)	(0.0051)	(0.0046)	(0.0064)	(0.0138)	(0.0074)	(0.0037)	(0.0046)	(0.0057)
Island									
Sumatera	-0.0213*	-0.0039	-0.0271*	-0.0173*	0.0245*	-0.0147**	-0.0295*	-0.0364*	-0.0362*
	(0.0044)	(0.0041)	(0.0041)	(0.0065)	(0.0065)	(0.0063)	(0.0058)	(0.0049)	(0.0053)
Java	-0.0724*	0.0060	0.0064	-0.0842*	0.0111	0.0212*	-0.0670*	-0.0065	-0.0045
	(0.0055)	(0.0052)	(0.0051)	(0.0084)	(0.0083)	(0.0076)	(0.0071)	(0.0059)	(0.0067)
Lesser Sunda Islands	-0.0158*	0.0045	-0.0248*	-0.0206*	0.0154**	-0.0165**	-0.0121**	-0.0091***	-0.0289*
	(0.0043)	(0.0040)	(0.0042)	(0.0064)	(0.0064)	(0.0065)	(0.0056)	(0.0047)	(0.0055)
Kalimantan	-0.0170*	0.0170*	-0.0152*	-0.0210*	0.0329*	-0.0007	-0.0173*	-0.0014	-0.0265*
	(0.0045)	(0.0041)	(0.0040)	(0.0068)	(0.0065)	(0.0062)	(0.0058)	(0.0045)	(0.0051)
Sulawesi	-0.0008	0.0163*	-0.0125*	0.0097	0.0461*	-0.0021	-0.0208*	-0.0211*	-0.0178*
	(0.0042)	(0.0040)	(0.0040)	(0.0064)	(0.0064)	(0.0062)	(0.0055)	(0.0046)	(0.0051)
Maluku	-0.0028	-0.0391*	-0.0450*	-0.0024	-0.0276*	-0.0332*	-0.0056	-0.0481*	-0.0547*
	(0.0049)	(0.0052)	(0.0053)	(0.0073)	(0.0081)	(0.0077)	(0.0062)	(0.0062)	(0.0075)
Chi Squared	45641.39 (*d.f* 144)			29425.53 (*d.f* 141)			16417.27 (*d.f* 141)		
Pseudo R-Squared	0.2189			0.2299			0.2085		
Number of Observations	155,237			84,535			70,792		

Notes:

c. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

d. Standard errors are reported in brackets.

Table 5-7: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2007.

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Age Groups									
10 to 12 years	-0.0193*	-0.0656*	-0.0272*	-0.0267*	-0.0998*	-0.0345*	-0.0233*	-0.0612*	-0.0265*
	(0.0025)	(0.0057)	(0.0031)	(0.0023)	(0.0037)	(0.0023)	(0.0035)	(0.0074)	(0.0046)
15 to 17 years	0.0163*	0.0495*	0.0291*	0.0170*	0.0916*	0.0326*	0.0157*	0.0519*	0.0340*
	(0.0019)	(0.0024)	(0.0022)	(0.0020)	(0.0021)	(0.0017)	(0.0026)	(0.0034)	(0.0033)
Child Characteristics									
Girls	-0.0003	-0.0047*	-0.0111*	-0.0286*	-0.0467*	-0.0068*	-	-	-
	(0.0015)	(0.0015)	(0.0017)	(0.0016)	(0.0017)	(0.0014)			
Biological Child	-0.0398*	-0.0442*	0.0005	-0.0181*	-0.0208*	0.0075*	-0.0200*	-0.0324*	0.0021
	(0.0019)	(0.0020)	(0.0030)	(0.0029)	(0.0028)	(0.0028)	(0.0031)	(0.0032)	(0.0045)
Household Head's Characteristics									
Age	-0.0005*	-0.0007*	-0.0001	-0.00002	-0.0003*	-0.00002	-0.0003**	-0.0007*	-0.00001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)
Female Headed	-0.0220	-0.0136	-0.0277	0.0091	-0.0459	0.0404***	-0.0134	-0.0083	-0.0277
	(0.0305)	(0.0325)	(0.0385)	(0.0296)	(0.0402)	(0.0208)	(0.0311)	(0.0349)	(0.0444)
Household Head's Education									
Completed Primary	-0.0157*	-0.0115*	-0.0092**	-0.0078**	-0.0200*	-0.0139*	-0.0209*	-0.0077	-0.0078
	(0.0045)	(0.0036)	(0.0042)	(0.0032)	(0.0027)	(0.0025)	(0.0053)	(0.0049)	(0.0062)
Junior Secondary	-0.0132*	-0.0309*	-0.0194*	-0.0010	-0.0591*	-0.0330*	-0.0183*	-0.0275*	-0.0192*
	(0.0048)	(0.0041)	(0.0046)	(0.0037)	(0.0036)	(0.0033)	(0.0057)	(0.0056)	(0.0068)
Senior Secondary	-0.0171*	-0.0453*	-0.0284*	-0.0013	-0.0827*	-0.0307*	-0.0223*	-0.0478*	-0.0336*
	(0.0048)	(0.0044)	(0.0048)	(0.0040)	(0.0045)	(0.0037)	(0.0059)	(0.0062)	(0.0072)
Tertiary Education	-0.0098***	-0.0417*	-0.0322*	0.0018	-0.1188*	-0.0483*	-0.0175**	-0.0684*	-0.0265
	(0.0053)	(0.0056)	(0.0067)	(0.0065)	(0.0119)	(0.0077)	(0.0070)	(0.0119)	(0.0101)
Household Head's Employment									
Employer	0.0237*	0.0049***	-0.0207*	0.0288*	0.0027	-0.0185*	0.0246*	0.0044	-0.0247*
	(0.0025)	(0.0025)	(0.0030)	(0.0031)	(0.0029)	(0.0024)	(0.0034)	(0.0036)	(0.0044)
Employee	-0.0040***	0.0010	0.0012	0.0040	0.0100*	0.0038***	-0.0055***	0.0050***	-0.0012
	(0.0023)	(0.0020)	(0.0020)	(0.0033)	(0.0029)	(0.0021)	(0.0031)	(0.0028)	(0.0030)

Table 5-7: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Casual Worker	0.0027	0.0077	0.0055	0.0309*	0.0039	0.0071	0.0091	0.0034	0.0101
	(0.0064)	(0.0053)	(0.0056)	(0.0079)	(0.0074)	(0.0052)	(0.0077)	(0.0076)	(0.0078)
Unpaid Worker	0.0032	0.0083	0.0001	0.0370*	-0.0045	-0.0204*	0.0059	0.0149	-0.0107
	(0.0069)	(0.0072)	(0.0088)	(0.0064)	(0.0072)	(0.0068)	(0.0095)	(0.0101)	(0.0136)
Others	0.0049	0.0059***	0.0024	0.0197*	0.0089***	0.0021	0.0044	0.0081	0.0049
	(0.0041)	(0.0035)	(0.0037)	(0.0060)	(0.0054)	(0.0043)	(0.0057)	(0.0051)	(0.0053)
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0044	-0.0143*	-0.0124*	-0.0097*	-0.0273*	-0.0075*	-0.0033	-0.0190*	-0.0124**
	(0.0038)	(0.0029)	(0.0033)	(0.0028)	(0.0023)	(0.0022)	(0.0047)	(0.0039)	(0.0049)
Junior Secondary	-0.0073***	-0.0308*	-0.0272*	-0.0030	-0.0712*	-0.0287*	-0.0088***	-0.0318*	-0.0257*
	(0.0042)	(0.0036)	(0.0040)	(0.0035)	(0.0037)	(0.0033)	(0.0054)	(0.0048)	(0.0059)
Senior Secondary	-0.0107**	-0.0399*	-0.0374*	0.0003	-0.0997*	-0.0365*	-0.0095***	-0.0430*	-0.0426*
	(0.0043)	(0.0041)	(0.0045)	(0.0040)	(0.0056)	(0.0044)	(0.0055)	(0.0057)	(0.0067)
Tertiary Education	-0.0050	-0.0350*	-0.0425*	-0.0118	-0.1077*	-0.0446*	-0.0075	-0.0599*	-0.0496*
	(0.0050)	(0.0055)	(0.0072)	(0.0081)	(0.0138)	(0.0097)	(0.0072)	(0.0126)	(0.0116)
Spouse's Employment									
Employer	0.0536*	0.0190*	-0.0228*	0.0743*	0.0054	-0.0143*	0.0426*	0.0097**	-0.0223*
	(0.0030)	(0.0033)	(0.0043)	(0.0041)	(0.0041)	(0.0037)	(0.0040)	(0.0048)	(0.0060)
Employee	-0.0022	0.0143*	0.0011	-0.0066	0.0196*	0.0105*	-0.0029	0.0109**	-0.00004
	(0.0033)	(0.0031)	(0.0032)	(0.0053)	(0.0047)	(0.0037)	(0.0046)	(0.0045)	(0.0047)
Casual Worker	0.0009	0.0157***	-0.0061	0.0210***	0.0310*	0.0029	0.0114	0.0194***	-0.0103
	(0.0117)	(0.0082)	(0.0096)	(0.0108)	(0.0090)	(0.0076)	(0.0123)	(0.0108)	(0.0139)
Unpaid Worker	0.0259*	0.0130*	-0.0091**	0.0443*	0.0093**	-0.0058***	0.0193*	0.0106**	-0.0118**
	(0.0032)	(0.0033)	(0.0040)	(0.0040)	(0.0036)	(0.0031)	(0.0041)	(0.0046)	(0.0057)
Others	-0.0146*	0.0012	-0.0034	-0.0420*	-0.0160*	0.0145*	-0.0150*	-0.0001	-0.0083**
	(0.0029)	(0.0025)	(0.0025)	(0.0042)	(0.0036)	(0.0029)	(0.0038)	(0.0035)	(0.0037)
Income (Rp.)									
Household Income	0.0032*	-0.0030*	-0.0098*	0.00005	-0.0207*	-0.0120*	0.0001	-0.0088*	-0.0115*
	(0.0006)	(0.0009)	(0.0012)	(0.0020)	(0.0024)	(0.0019)	(0.0013)	(0.0020)	(0.0019)
Square of HH Income	-0.00002	0.0001*	0.0002*	0.0003***	0.0010*	0.0004	0.00005	0.0002	0.0003*
	(0.00002)	(0.00003)	(0.00003)	(0.0002)	(0.0003)	(0.0003)	(0.0001)	(0.0002)	(0.0001)

Table 5-7: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Household Characteristics									
Birth Order	0.0014	0.0203*	0.0072*	0.0070*	0.0398*	0.0018	-0.0009	0.0247*	0.0078**
	(0.0022)	(0.0027)	(0.0027)	(0.0023)	(0.0028)	(0.0022)	(0.0030)	(0.0039)	(0.0038)
Child Aged 0-5 years	0.0011	-0.0101*	0.0006	-0.0023	-0.0238*	0.0034	0.0034	-0.0159*	0.0017
	(0.0025)	(0.0029)	(0.0030)	(0.0026)	(0.0031)	(0.0024)	(0.0034)	(0.0042)	(0.0042)
Child Aged 6-9 years	0.0045***	-0.0138*	-0.0029	-0.0029	-0.0310*	0.0035	0.0076**	-0.0179*	-0.0029
	(0.0025)	(0.0030)	(0.0030)	(0.0026)	(0.0031)	(0.0024)	(0.0034)	(0.0042)	(0.0043)
Child Aged 10-14	-0.00002	-0.0156*	0.0021	-0.0005	-0.0280*	0.0038***	0.0038	-0.0181*	0.0030
years	(0.0022)	(0.0029)	(0.0027)	(0.0021)	(0.0029)	(0.0022)	(0.0030)	(0.0041)	(0.0039)
Child Aged 15-17	-0.0030**	-0.0030	0.0006	-0.0019	-0.0118*	0.0058*	-0.0020	-0.0029	0.0036
years	(0.0015)	(0.0019)	(0.0018)	(0.0016)	(0.0020)	(0.0014)	(0.0020)	(0.0028)	(0.0026)
Number of Adults	-0.0055*	-0.0020*	0.0046*	-0.0082*	-0.0030*	0.0057*	-0.0034*	-0.0002	0.0061*
	(0.0007)	(0.0007)	(0.0008)	(0.0009)	(0.0008)	(0.0007)	(0.0010)	(0.0011)	(0.0011)
Rural	-	-	-	-	-	-	-	-	-
Community Characteristics									
Dwelling Ownership	0.00004	-0.0002	-0.00003	-0.0005*	0.0003	-0.0011*	-0.0002	0.0003	0.0003
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)
Improved Drinking	-0.0001	-0.0005*	-0.0003***	0.0005*	0.0001	-0.0004*	0.0001	-0.0007*	-0.0006**
Water	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)
Improved Sanitation	0.0006*	0.0008*	0.0001	0.0023*	0.0005*	-0.00003	0.0002	0.0009*	0.0006***
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)
Source of Electricity	0.0001	-0.0002	0.0002	-0.0012*	-0.0004*	0.0001	0.0001	-0.0004***	-0.0002
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0003)
Number of Schools	0.0118	0.0313*	-0.0070	0.0022	0.0187***	-0.0002	0.0035	0.0513*	-0.0117
	(0.0106)	(0.0111)	(0.0126)	(0.0120)	(0.0112)	(0.0097)	(0.0142)	(0.0153)	(0.0185)
Student-teacher Ratios	-0.0100	-0.0308*	0.0052	0.0203***	-0.0228**	-0.0009	-0.0040	-0.0478*	0.0134
	(0.0099)	(0.0104)	(0.0119)	(0.0112)	(0.0105)	(0.0091)	(0.0133)	(0.0142)	(0.0173)
GRDP	-0.0004*	-0.0001	-0.0002	-0.0013*	-0.0005*	-0.0003*	-0.0005*	0.0001	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)

Table 5-7: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Telephone	0.0001	-0.0134*	-0.0201*	-0.0068	-0.0239*	-0.0193*	-0.0055***	-0.0333*	-0.0243*
	(0.0019)	(0.0025)	(0.0031)	(0.0051)	(0.0066)	(0.0054)	(0.0029)	(0.0048)	(0.0047)
Computer	0.0068*	-0.0044	-0.0134*	0.0165**	-0.0402*	-0.0157***	0.0076***	-0.0335*	-0.0156**
	(0.0025)	(0.0037)	(0.0048)	(0.0071)	(0.0126)	(0.0088)	(0.0041)	(0.0103)	(0.0079)
Island									
Sumatera	-0.0105	0.0298*	-0.0288*	-0.0319*	-0.0177*	-0.0269*	-0.0074	0.0397*	-0.0308**
	(0.0070)	(0.0095)	(0.0082)	(0.0060)	(0.0054)	(0.0051)	(0.0096)	(0.0143)	(0.0126)
Java	-0.0325*	0.0291*	-0.0136	-0.1050*	-0.0223*	0.0238*	-0.0285**	0.0184	-0.0222
	(0.0080)	(0.0103)	(0.0095)	(0.0084)	(0.0075)	(0.0067)	(0.0113)	(0.0155)	(0.0143)
Lesser Sunda Islands	-0.0067	0.0262*	-0.0424*	-0.0266*	-0.0047	-0.0170*	-0.0090	0.0185	-0.0546*
	(0.0073)	(0.0098)	(0.0090)	(0.0059)	(0.0053)	(0.0052)	(0.0102)	(0.0147)	(0.0136)
Kalimantan	-0.0105	0.0417*	-0.0131***	-0.0245*	0.0026	-0.0145*	-0.0099	0.0453*	-0.0095
	(0.0070)	(0.0095)	(0.0079)	(0.0064)	(0.0055)	(0.0050)	(0.0097)	(0.0143)	(0.0122)
Sulawesi	-0.0153**	0.0323*	-0.0093	-0.0021	0.0032	-0.0095***	-0.0063	0.0418*	-0.0096
	(0.0069)	(0.0094)	(0.0079)	(0.0060)	(0.0054)	(0.0051)	(0.0095)	(0.0143)	(0.0122)
Maluku	0.0050	-0.0205***	-0.0351*	-0.0117***	-0.0578*	-0.0439*	0.0098	-0.0168	-0.0338**
	(0.0072)	(0.0119)	(0.0100)	(0.0068)	(0.0068)	(0.0066)	(0.0099)	(0.0173)	(0.0148)
Chi Squared	11416.82 (*d.f* 141)			32720.01 (*d.f* 141)			6672.62 (*d.f* 138)		
Pseudo R-Squared	0.2223			0.2124			0.2321		
Number of Observations	53,773			101,554			28,315		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5-8: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2007.

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Age Groups									
10 to 12 years	-0.0121*	-0.0688*	-0.0281*	-0.0275*	-0.1285*	-0.0356*	-0.0240*	-0.0624*	-0.0330*
	(0.0036)	(0.0092)	(0.0041)	(0.0034)	(0.0057)	(0.0033)	(0.0030)	(0.0044)	(0.0032)
15 to 17 years	0.0142*	0.0440*	0.0233*	0.0157*	0.1121*	0.0326*	0.0179*	0.0645*	0.0330*
	(0.0028)	(0.0033)	(0.0029)	(0.0028)	(0.0030)	(0.0024)	(00026)	(0.0026)	(0.0024)
Child Characteristics									
Girls	-	-	-	-	-	-	-	-	-
Biological Child	-0.0515*	-0.0481*	-0.0004	-0.0166*	-0.0157*	0.0040	-0.0186*	-0.0238*	0.0117*
	(0.0026)	(0.0026)	(0.0040)	(0.0044)	(0.0045)	(0.0038)	(0.0036)	(0.0032)	(0.0040)
Household Head's Characteristics									
Age	-0.0005*	-0.0006*	-0.0001	0.0001	0.00003	0.0001	-0.0002	-0.0006*	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.3506	-0.2923	-0.2901	-0.0359	-0.0235	0.0406	0.0985	-0.2800	0.0989
	(0.3707)	(0.3455)	(0.3764)	(0.0567)	(0.0543)	(0.0297)	(0.1590)	(0.3577)	(0.1558)
Household Head's Education									
Completed Primary	0.0008	-0.0190*	-0.0112**	-0.0089***	-0.0220*	-0.0166*	-0.0060	-0.0171*	-0.0111*
	(0.0086)	(0.0052)	(0.0055)	(0.0046)	(0.0041)	(0.0035)	(0.0044)	(0.0032)	(0.0035)
Junior Secondary	0.0031	-0.0356*	-0.0206*	-0.0014	-0.0736*	-0.0345*	0.0005	-0.0401*	-0.0316*
	(0.0090)	(0.0060)	(0.0062)	(0.0054)	(0.0055)	(0.0046)	(0.0050)	(0.0044)	(0.0047)
Senior Secondary	0.0010	-0.0428*	-0.0233*	-0.0006	-0.1025*	-0.0359*	-0.0014	-0.0572*	-0.0252*
	(0.0090)	(0.0061)	(0.0064)	(0.0058)	(0.0067)	(0.0053)	(0.0053)	(0.0055)	(0.0050)
Tertiary Education	0.0085	-0.0373*	-0.0331*	0.0035	-0.1590*	-0.0510*	-0.0004	-0.0711*	-0.0450*
	(0.0094)	(0.0072)	(0.0086)	(0.0099)	(0.0189)	(0.0109)	(0.0080)	(0.0133)	(0.0109)
Household Head's Employment									
Employer	0.0196*	0.0005	-0.0161*	0.0413*	0.0077***	-0.0232*	0.0120*	-0.0051	-0.0128*
	(0.0036)	(0.0035)	(0.0041)	(0.0045)	(0.0043)	(0.0033)	(0.0039)	(0.0036)	(0.0033)
Employee	-0.0029	-0.0040	0.0037	0.0092***	0.0150*	0.0045	-0.0027	0.0035	0.0027
	(0.0033)	(0.0028)	(0.0027)	(0.0048)	(0.0044)	(0.0030)	(0.0043)	(0.0036)	(0.0030)
Casual Worker	-0.0074	0.0115	-0.0013	0.0355*	0.0103	0.0106	0.0246**	-0.0043	0.0031
	(0.0113)	(0.0072)	(0.0084)	(0.0118)	(0.0111)	(0.0072)	(0.0102)	(0.0093)	(0.0076)

Table 5-8: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Unpaid Worker	-0.0007	-0.0042	0.0119	0.0428*	0.0008	-0.0363*	0.0278*	-0.0120	-0.0039
	(0.0100)	(0.0103)	(0.0110)	(0.0097)	(0.0109)	(0.0105)	(0.0078)	(0.0085)	(0.0085)
Others	0.0036	-0.0008	-0.0013	0.0282*	0.0011	0.0011	0.0095	0.0169*	0.0029
	(0.0059)	(0.0048)	(0.0051)	(0.0089)	(0.0083)	(0.0060)	(0.0077)	(0.0060)	(0.0061)
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0062	-0.0043	-0.0128*	-0.0085**	-0.0330*	-0.0033	-0.0109*	-0.0201*	-0.0123*
	(0.0061)	(0.0045)	(0.0045)	(0.0040)	(0.0036)	(0.0032)	(0.0037)	(0.0028)	(0.0031)
Junior Secondary	-0.0041	-0.0249*	-0.0294*	-0.0007	-0.0840*	-0.0256*	-0.0053	-0.0551*	-0.0321*
	(0.0067)	(0.0055)	(0.0055)	(0.0051)	(0.0055)	(0.0047)	(0.0046)	(0.0047)	(0.0046)
Senior Secondary	-0.0095	-0.0297*	-0.0326*	0.0016	-0.1134*	-0.0316*	-0.0010	-0.0845*	-0.0415*
	(0.0068)	(0.0058)	(0.0060)	(0.0060)	(0.0082)	(0.0062)	(0.0052)	(0.0077)	(0.0062)
Tertiary Education	-0.0019	-0.0276*	-0.0341*	-0.0143	-0.1289*	-0.0414*	-0.0123	-0.0845*	-0.0466*
	(0.0075)	(0.0070)	(0.0088)	(0.0128)	(0.0220)	(0.0142)	(0.0095)	(0.0152)	(0.0134)
Spouse's Employment									
Employer	0.0625*	0.0243*	-0.0259*	0.0646*	0.0055	-0.0224*	0.0802*	0.0059	-0.0045
	(0.0045)	(0.0044)	(0.0066)	(0.0061)	(0.0063)	(0.0052)	(0.0054)	(0.0048)	(0.0054)
Employee	-0.0020	0.0162*	0.0032	-0.0149***	0.0145**	0.0090***	0.0046	0.0233*	0.0131**
	(0.0048)	(0.0041)	(0.0043)	(0.0079)	(0.0073)	(0.0051)	(0.0069)	(0.0053)	(0.0054)
Casual Worker	-0.3814	0.0131*	0.0106	0.0226	0.0448*	-0.0028	0.0188	0.0139	0.0095
	(16.3740)	(0.0047)	(0.4895)	(0.0156)	(0.0139)	(0.0107)	(0.0144)	(0.0105)	(0.0108)
Unpaid Worker	0.0315*	0.0492	-0.0057	0.0449*	0.0107***	-0.0121*	0.0444*	0.0097**	0.0020
	(0.0049)	(1.6927)	(0.0054)	(0.0057)	(0.0055)	(0.0043)	(0.0054)	(0.0044)	(0.0046)
Others	-0.0157*	0.0006	0.0024	-0.0408*	-0.0131**	0.0100**	-0.0522*	-0.0200*	0.0209*
	(0.0045)	(0.0036)	(0.0034)	(0.0059)	(0.0054)	(0.0039)	(0.0062)	(0.0044)	(0.0043)
Income (Rp.)									
Household Income	0.0046*	-0.0007	-0.0085*	0.00001	-0.0270*	-0.0126*	0.0003	-0.0125*	-0.0117*
	(0.0008)	(0.0012)	(0.0016)	(0.0030)	(0.0035)	(0.0027)	(0.0025)	(0.0029)	(0.0026)
Square of HH Income	-0.0001**	0.00002	0.0001*	0.0003	0.0013**	0.0003	0.0003	0.0006	0.0006
	(0.00002)	(0.0001)	(0.00004)	(0.0003)	(0.0005)	(0.0005)	(0.0002)	(0.0004)	(0.0004)

Table 5-8: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Household Characteristics									
Birth Order	0.0036	0.0144*	0.0068***	0.0085**	0.0552*	-0.0039	0.0047	0.0216*	0.0091*
	(0.0032)	(0.0038)	(0.0038)	(0.0033)	(0.0043)	(0.0030)	(0.0029)	(0.0034)	(0.0031)
Child Aged 0-5 years	-0.0029	-0.0042	-0.0008	-0.0046	-0.0339*	0.0104*	0.0007	-0.0127*	-0.00055
	(0.0036)	(0.0040)	(0.0042)	(0.0038)	(0.0047)	(0.0034)	(0.0033)	(0.0037)	(0.0034)
Child Aged 6-9 years	0.0011	-0.0091**	-0.0035	-0.0043	-0.0438*	0.0087**	-0.0010	-0.0159*	-0.0031
	(0.0036)	(0.0041)	(0.0042)	(0.0038)	(0.0047)	(0.0034)	(0.0033)	(0.0037)	(0.0035)
Child Aged 10-14	-0.0040	-0.0115*	0.0009	-0.0005	-0.0413*	0.0104*	-0.0001	-0.0122*	-0.0044
years	(0.0032)	(0.0040)	(0.0038)	(0.0032)	(0.0045)	(0.0030)	(0.0027)	(0.0035)	(0.0031)
Child Aged 15-17	-0.0049**	-0.0023	-0.0033	-0.0025	-0.0189*	0.0091*	-0.0009	-0.0041***	0.0020
years	(0.0021)	(0.0026)	(0.0025)	(0.0023)	(0.0030)	(0.0021)	(0.0020)	(0.0022)	(0.0020)
Number of Adults	-0.0071*	-0.0025**	0.0028*	-0.0103*	-0.0042*	0.0075*	-0.0054*	-0.0014	0.0036*
	(0.0011)	(0.0010)	(0.0011)	(0.0013)	(0.0012)	(0.0010)	(0.0011)	(0.0010)	(0.0010)
Rural	-	-	-	-	-	-	-	-	-
Community Characteristics									
Dwelling Ownership	0.0004***	-0.0007*	-0.0004***	0.0002	0.0006**	-0.0009*	-0.0015*	-0.0002	-0.0013*
	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0002)	(0.0003)	(0.0002)	(0.0002)
Improved Drinking	-0.0004***	-0.0004***	0.0001	0.0006**	0.00003	-0.0004**	0.0003	0.0003	-0.0004**
Water	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Improved Sanitation	0.0010*	0.0006*	-0.0003	0.0026*	0.0002	0.0001	0.0018*	0.0006*	-0.0001
	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Source of Electricity	0.0001	0.0002	0.0005**	-0.0013*	-0.0003	0.0002	-0.0010*	-0.0005*	-0.0001
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Number of Schools	0.0257	0.0185	0.0013	0.0090	0.0519*	-0.0085	-0.0042	-0.0286**	0.0095
	(0.0158)	(0.0160)	(0.0171)	(0.0173)	(0.0167)	(0.0135)	(0.0162)	(0.0143)	(0.0139)
Student-teacher Ratios	-0.0205	-0.0209	-0.0065	0.0152	-0.0586*	0.0048	0.0247	0.0294**	-0.0073
	(0.0149)	(0.0152)	(0.0161)	(0.0161)	(0.0155)	(0.0127)	(0.0152)	(0.0136)	(0.0131)
GRDP	-0.0001	-0.0004*	-0.0002	-0.0011*	-0.0001	-0.0005*	-0.0015*	-0.0010*	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0001)

Table 5-8: Multinomial Logit (Marginal Effects) of Child Activities of All Working Children by Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Telephone	0.0056**	-0.0035	-0.0137*	-0.0124	-0.0306*	-0.0169**	-0.0005	-0.0148***	-0.0222*
	(0.0026)	(0.0030)	(0.0038)	(0.0079)	(0.0101)	(0.0076)	(0.0061)	(0.0079)	(0.0077)
Computer	0.0072**	-0.0028	-0.0076	-0.0039	-0.0895*	-0.0169	0.0284*	0.0037	-0.0110
	(0.0032)	(0.0040)	(0.0057)	(0.0129)	(0.0238)	(0.0134)	(0.0076)	(0.0114)	(0.0113)
Island									
Sumatera	-0.0173***	0.0115	-0.0228**	-0.0252*	0.0207**	-0.0125	-0.0409*	-0.0571*	-0.0383*
	(0.0100)	(0.0122)	(0.0105)	(0.0088)	(0.0086)	(0.0076)	(0.0077)	(0.0063)	(0.0068)
Java	-0.0445*	0.0283**	-0.0012	-0.1180*	0.0034	0.0406*	-0.0881*	-0.0424*	0.0103
	(0.0112)	(0.0134)	(0.0123)	(0.0123)	(0.0117)	(0.0098)	(0.0110)	(0.0089)	(0.0092)
Lesser Sunda Islands	-0.0074	0.0284**	-0.0255**	-0.0311*	0.0174**	-0.0052	-0.0200*	-0.0271*	-0.0249*
	(0.0103)	(0.0127)	(0.0117)	(0.0087)	(0.0084)	(0.0078)	(0.0076)	(0.0061)	(0.0069)
Kalimantan	-0.0172***	0.0274**	-0.0138	-0.0286*	0.0290*	-0.0006	-0.0196**	-0.0198*	-0.0250*
	(0.0101)	(0.0121)	(0.0101)	(0.0096)	(0.0088)	(0.0076)	(0.0081)	(0.0061)	(0.0066)
Sulawesi	-0.0303*	0.0095	-0.0065	0.0114	0.0486*	-0.0012	-0.0201**	-0.0428*	-0.0121***
	(0.0098)	(0.0121)	(0.0100)	(0.0089)	(0.0086)	(0.0077)	(0.0079)	(0.0064)	(0.0067)
Maluku	-0.0022	-0.0297***	-0.0341**	-0.0114	-0.0386*	-0.0327*	-0.0102	-0.0665*	-0.0533*
	(0.0104)	(0.0159)	(0.0134)	(0.0102)	(0.0107)	(0.0095)	(0.0087)	(0.0080)	(0.0095)
Chi Squared	5486.73 (*d.f* 138)			20499.57 (*d.f* 138)			11327.22 (*d.f* 138)		
Pseudo R-Squared	0.2438			0.2125			0.2032		
Number of Observations	25,458			56,135			45,419		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Appendix 5-A

Table 5-A1: Variable Names and Definitions

Variables	Definitions
Child Characteristics	
Age	Child's age in completed years
Girls	1 if the child is a girl, 0 otherwise
Son or daughter	1 if the child is a son or daughter to the household, 0 otherwise
Household Head's Characteristics	
Age	Household head's age in completed years
Female	1 if household head is female, 0 otherwise
Household Head's Education	
Not Completed Primary	1 if not completed primary, 0 otherwise (reference)
Completed Primary	1 if completed primary, 0 otherwise
Junior Secondary	1 if completed junior high school, 0 otherwise
Senior Secondary	1 if completed senior high school, 0 otherwise
Tertiary Education	1 if completed tertiary education, 0 otherwise
Household Head's Employment	
Self-Employed	1 if occupation is self-employed , 0 otherwise (reference)
Employer	1 if occupation is employer , 0 otherwise
Employee	1 if occupation is employee , 0 otherwise
Casual Worker	1 if occupation is casual worker , 0 otherwise
Unpaid Worker	1 if occupation is unpaid worker , 0 otherwise
Others	1 if occupation is others , 0 otherwise
Household Head Spouse's Education	
Not Completed Primary	1 if not completed primary, 0 otherwise (reference)
Completed Primary	1 if completed primary, 0 otherwise
Junior Secondary	1 if completed junior high school, 0 otherwise
Senior Secondary	1 if completed senior high school, 0 otherwise
Tertiary Education	1 if completed tertiary education, 0 otherwise
Household Head Spouse's Employment	
Self-Employed	1 if occupation is self-employed , 0 otherwise (reference)
Employer	1 if occupation is employer , 0 otherwise
Employee	1 if occupation is employee , 0 otherwise
Casual Worker	1 if occupation is casual worker , 0 otherwise
Unpaid Worker	1 if occupation is unpaid worker , 0 otherwise
Others	1 if occupation is others , 0 otherwise
Income (Rp.)	
Household Income	Household income (excluding children's earnings)
Square of Household Income	Square Root of Household Income
Household Characteristics	
Birth Order	Birth Order of the child in the household
Number of Children Aged Less Than 5 years	Number of children aged less than 5 years in the household
Number of Children Aged 6 to 9 years	Number of children aged 6 to 9 years in the household
Number of Children Aged 10 to 14 years	Number of children aged 10 to 14 years in the household
Number of Children Aged 15 to 17 years	Number of children aged 15 to 17 years in the household
Number of Adults (aged 18 years and above)	Number of adults in the household

Table 5-A1: Variable Names and Definitions (*continued*).

Variables	Definitions
Land Ownership (SUSENAS 2005)	
Privately Owned: Paddy	Size of farmed area of paddy in hectare which is privately owned by the household
Privately Owned: Dry Land (other crops than paddy)	Size of farmed area of dry land (other crops) in hectare which is privately owned by the household
Privately Owned but Managed by Others (both paddy and dry land)	Size of farmed area of paddy and dry land in hectare which is privately owned by the household but managed by others
Community Characteristics	
Dwelling Ownership	Percentage of households that own their dwelling in each province
Improved Drinking Water	Percentage of households that have improved drinking water source in each province
Improved Sanitation*	Percentage of households that have improved sanitation facility in each province
Source of Electricity*	Percentage of households that have improved their source of electricity in each province
Number of Schools	Number of schools in each province
Student-teacher Ratios	Ratios of student-teacher in each province
Gross Regional Domestic Product	GRDP per capita in each province
Telephone	1 if households have a telephone, 0 otherwise
Computer	1 if households have a computer, 0 otherwise
Island	
Sumatera	1 if household resides in Sumatera, 0 otherwise
Java	1 if household resides in Java, 0 otherwise
Lesser Sunda Islands	1 if household resides in Lesser Sunda Islands, 0 otherwise
Kalimantan	1 if household resides in Kalimantan, 0 otherwise
Sulawesi	1 if household resides in Sulawesi, 0 otherwise
Maluku	1 if household resides in Maluku, 0
New Guinea	1 if household resides in New Guinea, 0 otherwise (reference)

Note: *This information is not provided in SUSENAS 2005.

Table 5A-2: Descriptive Statistics, SUSENAS 2005.

	School Only	School and Work	Work Only	Neither Work nor School
Child Characteristics				
Age	12.95	14.23	15.77	14.69
	(2.20)	(2.04)	(1.37)	(1.89)
Girls	0.49	0.38	0.33	0.43
	(0.50)	(0.49)	(0.47)	(0.50)
Biological child	0.94	0.92	0.88	0.93
	(0.23)	(0.27)	(0.32)	(0.26)
Household Head's Characteristics				
Age	44.87	46.12	46.79	46.54
	(8.64)	(9.24)	(9.69)	(9.43)
Female Headed	0.001	0.002	0.002	0.002
	(0.03)	(0.02)	(0.04)	(0.05)
Household Head's Education				
Not Completed Primary	0.05	0.12	0.15	0.12
	(0.22)	(0.32)	(0.36)	(0.33)
Completed Primary	0.48	0.52	0.68	0.68
	(0.50)	(0.50)	(0.47)	(0.46)
Junior Secondary	0.18	0.18	0.09	0.10
	(0.38)	(0.38)	(0.29)	(0.31)
Senior Secondary	0.22	0.15	0.06	0.07
	(0.41)	(0.36)	(0.23)	(0.26)
Tertiary Education	0.08	0.03	0.02	0.02
	(0.26)	(0.17)	(0.15)	(0.13)
Household Head's Employment				
Self-Employed	0.29	0.19	0.25	0.32
	(0.45)	(0.39)	(0.43)	(0.47)
Employer	0.31	0.57	0.46	0.34
	(0.46)	(0.49)	(0.50)	(0.47)
Employee	0.29	0.13	0.15	0.18
	(0.45)	(0.33)	(0.36)	(0.38)
Casual Worker	0.07	0.06	0.09	0.11
	(0.25)	(0.24)	(0.28)	(0.31)
Unpaid Worker	0.01	0.02	0.01	0.01
	(0.08)	(0.13)	(0.09)	(0.08)
Others	0.04	0.04	0.04	0.05
	(0.19)	(0.19)	(0.21)	(0.21)
Spouse's Characteristics				
Spouse's Education	0.08	0.15	0.20	0.17
Not Completed Primary	(0.27)	(0.36)	(0.40)	(0.38)
	0.53	0.57	0.68	0.69
Completed Primary	(0.50)	(0.50)	(0.47)	(0.46)
	0.18	0.17	0.07	0.08
Junior Secondary	(0.38)	(0.37)	(0.25)	(0.27)
	0.17	0.09	0.03	0.04
Senior Secondary	(0.37)	(0.29)	(0.18	(0.21)
	0.05	0.02	0.02	0.01
Tertiary Education	(0.22)	(0.14)	(0.13)	(0.10)
Spouse's Employment				
Self-Employed	0.10	0.08	0.09	0.09
	(0.30)	(0.28)	(0.28)	(0.29)
Employer	0.06	0.18	0.08	0.05
	(0.24)	(0.38)	(0.26)	(0.22)
Employee	0.10	0.04	0.06	0.05
	(0.30)	(0.20)	(0.23)	(0.22)

Table 5A-2: Descriptive Statistics, SUSENAS 2005 (*continued*).

	School Only	School and Work	Work Only	Neither Work nor School
Casual Worker	0.02	0.04	0.05	0.04
	(0.15)	(0.19)	(0.21)	(0.21)
Unpaid Worker	0.17	0.45	0.28	0.18
	(0.38)	(0.50)	(0.45)	(0.38)
Others	0.54	0.21	0.46	0.59
	(0.50)	(0.41)	(0.50)	(0.49)
Income (Rp.)				
Household Income	1.11	0.62	0.50	0.70
	(1.50)	(1.50)	(0.89)	(0.89)
Square of Household Income	3.50	2.53	1.01	1.40
	(19.00)	(29.22)	(6.12)	(7.01)
Household Characteristics				
Birth Order	2.28	2.75	2.76	2.57
	(1.14)	(1.42)	(1.40)	(1.30)
Number of Children Aged 0-5	0.44	0.49	0.45	0.45
	(0.65)	(0.73)	(0.68)	(0.67)
Number of Children Aged 6-9	0.46	0.56	0.47	0.47
	(0.62)	(0.69)	(0.64)	(0.64)
Number of Children Aged 10-14	0.52	0.73	0.72	0.64
	(0.66)	(0.78)	(0.78)	(0.74)
Number of Children Aged 15-17	0.34	0.32	0.27	0.31
	(0.55)	(0.53)	(0.49)	(0.52)
Number of Adults	2.77	2.75	2.86	2.88
	(1.08)	(1.03)	(1.13)	(1.10)
Rural	0.63	0.83	0.76	0.75
	(0.48)	(0.37)	(0.42)	(0.43)
Land Ownership				
Privately owned: Paddy	0.01	0.02	0.01	0.02
	(0.12)	(0.14)	(0.09)	(0.14)
Privately owned: Dry Land	0.05	0.07	0.06	0.05
	(0.22)	(0.19)	(0.23)	(0.22)
Privately owned but managed by others (both paddy and dry land)	0.004	0.007	0.004	0.003
	(0.06)	(0.06)	(0.03)	(0.03)
Facilities				
Owning a Dwelling	80.34	79.91	81.27	81.46
	(7.37)	(7.38)	(6.89)	(6.15)
Improved Drinking Water	46.36	47.06	45.98	44.72
	(8.38)	(7.33)	(8.21)	(8.31)
Number of Schools	8.76	8.82	8.75	8.85
	(0.92)	(0.83)	(0.93)	(0.95)
Student-teacher Ratio	17.86	17.92	18.08	18.44
	(2.21)	(1.78)	(2.22)	(2.51)
Gross Regional Domestic Product (GRDP)	12.10	10.53	11.03	10.66
	(11.68)	(8.61)	(10.42)	(9.41)
Telephone	0.11	0.05	0.07	0.06
	(0.32)	(0.23)	(0.25)	(0.24)
Computer	0.03	0.01	0.02	0.01
	(0.16)	(0.11)	(0.13)	(0.11)
Island				
Sumatera	0.33	0.39	0.26	0.26
	(0.47)	(0.49)	(0.44)	(0.44)
Java	0.28	0.19	0.28	0.34
	(0.45)	(0.39)	(0.45)	(0.47)
Lesser Sunda Islands	0.07	0.12	0.11	0.08
	(0.26)	(0.32)	(0.31)	(0.27)

Table 5A-2: Descriptive Statistics, SUSENAS 2005 (*continued*).

	School Only	**School and Work**	**Work Only**	**Neither Work nor School**
Kalimantan	0.12	0.10	0.13	0.10
	(0.32)	(0.30)	(0.33)	(0.30)
Sulawesi	0.14	0.15	0.17	0.18
	(0.35)	(0.36)	(0.37)	(0.38)
Maluku	0.03	0.01	0.02	0.02
	(0.18)	(0.10)	(0.14)	(0.16)
New Guinea	0.02	0.03	0.04	0.02
	(0.13)	(0.18)	(0.19)	(0.15)
Number of Observations	132,402	4,105	11,557	6,745

Notes: Standard deviations are reported in brackets.

Table 5A-3: Descriptive Statistics, SUSENAS 2007.

	School Only	School and Work	Work Only	Neither Work nor School
Child Characteristics				
Age	12.91	14.16	15.68	14.80
	(2.19)	(2.07)	(1.48)	(1.95)
Girls	0.48	0.37	0.30	0.39
	(0.50)	(0.48)	(0.46)	(0.49)
Biological child	0.92	0.87	0.88	0.92
	(0.26)	(0.33)	(0.33)	(0.27)
Household Head's Characteristics				
Age	45.18	45.81	47.23	47.13
	(8.95)	(9.56)	(10.20)	(9.56)
Female Headed	0.001	0.001	0.004	0.001
	(0.03)	(0.03)	(0.02)	(0.03)
Household Head's Education				
Not Completed Primary	0.04	0.08	0.14	0.10
	(0.20)	(0.28)	(0.35)	(0.30)
Completed Primary	0.47	0.52	0.69	0.67
	(0.50)	(0.50)	(0.46)	(0.47)
Junior Secondary	0.17	0.17	0.10	0.12
	(0.37)	(0.38)	(0.30)	(0.32)
Senior Secondary	0.23	0.17	0.06	0.10
	(0.42)	(0.38)	(0.23)	(0.30)
Tertiary Education	0.09	0.06	0.01	0.02
	(0.29)	(0.24)	(0.12)	(0.13)
Household Head's Employment				
Self-Employed	0.24	0.13	0.18	0.27
	(0.43)	(0.34)	(0.38)	(0.44)
Employer	0.37	0.65	0.59	0.37
	(0.48)	(0.48)	(0.49)	(0.48)
Employee	0.33	0.16	0.17	0.28
	(0.47)	(0.37)	(0.38)	(0.45)
Casual Worker	0.01	0.01	0.01	0.02
	(0.12)	(0.11)	(0.12)	(0.15)
Unpaid Worker	0.01	0.02	0.01	0.01
	(0.10)	(0.14)	(0.12)	(0.10)
Others	0.03	0.03	0.04	0.05
	(0.18)	(0.16)	(0.19)	(0.22)
Spouse's Characteristics				
Spouse's Education				
Not Completed Primary	0.07	0.12	0.20	0.14
	(0.25)	(0.33)	(0.40)	(0.35)
Completed Primary	0.52	0.55	0.68	0.69
	(0.50)	(0.50)	(0.47)	(0.46)
Junior Secondary	0.17	0.16	0.08	0.10
	(0.38)	(0.37)	(0.27)	(0.30)
Senior Secondary	0.18	0.13	0.03	0.06
	(0.38)	(0.33)	(0.18)	(0.23)
Tertiary Education	0.06	0.04	0.01	0.01
	(0.25)	(0.20)	(0.11)	(0.10)
Spouse's Employment				
Self-Employed	0.10	0.06	0.07	0.09
	(0.30)	(0.23)	(0.25)	(0.29)
Employer	0.08	0.21	0.10	0.06
	(0.27)	(0.41)	(0.30)	(0.24)
Employee	0.12	0.06	0.07	0.10
	(0.33)	(0.24)	(0.26)	(0.30)

Table 5A-3: Descriptive Statistics, SUSENAS 2007 (*continued*).

	School Only	School and Work	Work Only	Neither Work nor School
Casual Worker	0.01	0.01	0.01	0.01
	(0.08)	(0.08)	(0.10)	(0.10)
Unpaid Worker	0.25	0.52	0.46	0.25
	(0.44)	(0.50)	(0.50)	(0.43)
Others	0.44	0.14	0.29	0.49
	(0.50)	(0.35)	(0.45)	(0.50)
Income (Rp.)				
Household Income	1.12	0.63	0.50	0.74
	(1.51)	(1.51)	(0.88)	(0.94)
Square of Household Income	3.52	2.68	1.03	1.44
	(20.00)	(28.14)	(6.22)	(7.99)
Household Characteristics				
Birth Order	2.28	2.65	2.87	2.63
	(1.16)	(1.40)	(1.44)	(1.30)
Number of Children Aged 0-5	0.49	0.52	0.53	0.51
	(0.68)	(0.73)	(0.74)	(0.70)
Number of Children Aged 6-9	0.45	0.52	0.50	0.48
	(0.62)	90.68)	(0.65)	(0.63)
Number of Children Aged 10-14	0.49	0.64	0.73	063
	(0.65)	(0.75)	(0.78)	(0.73)
Number of Children Aged 15-17	0.33	0.32	0.28	0.29
	(0.55)	(0.54)	(0.50)	(0.51)
Number of Adults	2.76	2.72	2.83	2.92
	(1.08)	(1.05)	(1.11)	(1.15)
Rural	0.62	0.81	0.82	0.71
	(0.48)	(0.39)	(0.39)	(0.45)
Facilities				
Owning a Dwelling	77.08	77.09	78.22	78.02
	(8.55)	(7.89)	(7.80)	(7.95)
Improved Drinking Water	47.27	47.95	47.12	46.74
	(8.44)	(7.26)	(7.80)	(8.39)
Improved Sanitation	40.08	40.25	38.06	40.67
	(11.64)	(12.65)	(12.47)	(10.67)
Source of Electricity	85.01	82.32	81.38	86.44
	(14.02)	(14.92)	(16.82)	(14.03)
Number of Schools	9.09	8.98	8.97	9.26
	(1.02)	(0.90)	(0.99)	(1.07)
Student-teacher Ratio	14.09	14.29	14.03	14.20
	(2.31)	(2.43)	(2.29)	(2.25)
Gross Regional Domestic Product (GRDP)	15.78	12.77	13.84	14.69
	(14.20)	(9.03)	(11.88)	(12.36)
Telephone	0.13	0.08	0.03	0.04
	(0.34)	(0.27)	(0.18)	(0.19)
Computer	0.07	0.04	0.01	0.01
	(0.25)	(0.21)	(0.11)	(0.12)
Island				
Sumatera	0.33	0.34	0.26	0.25
	(0.47)	(0.47)	(0.44)	(0.43)
Java	0.28	0.14	0.22	0.39
	(0.45)	(0.35)	(0.41)	(0.49)
Lesser Sunda Islands	0.07	0.12	0.11	0.06
	(0.26)	(0.33)	(0.32)	(0.23)
Kalimantan	0.12	0.09	0.13	0.10
	(0.32)	(0.28)	(0.34)	(0.30)
Sulawesi	014	0.23	0.20	0.15
	(0.35)	(0.42)	(0.40)	(0.36)

Table 5A-3: Descriptive Statistics, SUSENAS 2007 (*continued*).

	School Only	**School and Work**	**Work Only**	**Neither Work nor School**
Maluku	0.03	0.04	0.02	0.02
	(0.18)	(0.21)	(0.15)	(0.13)
New Guinea	0.03	0.03	0.05	0.04
	(0.16)	(0.18)	(0.21)	(0.19)
Number of Observations	128,150	9,401	10,071	7,701

Notes: Standard deviations are reported in brackets.

Table 5A-4: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years and by Gender, SUSENAS 2005.

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-0.0064*	-0.0107*	-0.0040*	-	-	-	-	-	-
	(0.0009)	(0.0009)	(0.0010)						
Biological Child	-0.0032***	-0.0108*	-0.0009	-0.0009	-0.0059**	-0.0034	-0.0059**	-0.0136*	0.0020
	(0.0019)	(0.0016)	(0.0022)	(0.0029)	(0.0027)	(0.0031)	(0.0024)	(0.0017)	(0.0032)
Household Head's Characteristics									
Age	0.0001***	-0.0001	0.0001	0.0003*	0.0001	0.0002***	-0.0001	-0.0002**	-0.00002
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.0240	0.0234*	0.0102	-0.3081	0.0155	0.0195	-0.0103	0.0158***	0.0112
	(0.0195)	(0.0074)	(0.0136)	(0.3491)	(0.0264)	(0.7824)	(0.0167)	(0.0082)	(0.0176)
Household Head's Education									
Completed Primary	-0.0062*	-0.0088*	-0.0050*	-0.0058**	-0.0107*	-0.0071*	-0.0066*	-0.0070*	-0.0029
	(0.0017)	(0.0013)	(0.0018)	(0.0024)	(0.0021)	(0.0026)	(0.0022)	(0.0016)	(0.0026)
Junior Secondary	-0.0044**	-0.0244*	-0.0217*	-0.0058**	-0.0288*	-0.0263*	-0.0030	-0.0198*	-0.0167*
	(0.0020)	(0.0021)	(0.0025)	(0.0029)	(0.0032)	(0.0036)	(0.0026)	(0.0027)	(0.0034)
Senior Secondary	-0.0061*	-0.0246*	-0.0255*	-0.0058***	-0.0345*	-0.0284*	-0.0064**	-0.0147*	-0.0226*
	(0.0022)	(0.0025)	(0.0029)	(0.0032)	(0.0041)	(0.0041)	(0.0029)	(0.0028)	(0.0041)
Tertiary Education	-0.0090**	-0.0213*	-0.0269*	-0.0105***	-0.0409*	-0.0304*	-00074	-0.0095**	-0.0225*
	(0.0037)	(0.0045)	(0.0050)	(0.0058)	(0.0097)	(0.0072)	(0.0046)	(0.0043)	(0.0069)
Household Head's Employment									
Employer	0.0074*	0.0057*	-0.0031**	0.0102*	0.0097*	-0.0025	0.0045*	0.0012	-0.0038**
	(0.0013)	(0.0011)	(0.0014)	(0.0019)	(0.0018)	(0.0020)	(0.0016)	(0.0014)	(0.0019)
Employee	0.0005	-0.0035***	0.0001	0.0009	-0.0054***	0.0001	0.0005	-0.0020	-0.00004
	(0.0020)	(0.0019)	(0.0020)	(0.0031)	(0.0030)	(0.0028)	(0.0025)	(0.0021)	(0.0027)
Casual Worker	0.0032	0.0022	0.0041**	0.0014	0.0043	0.0027	0.0044***	0.0002	0.0053**
	(0.0022)	(0.0017)	(0.0018)	(0.0033)	(0.0027)	(0.0028)	(0.0027)	(0.0021)	(0.0025)
Unpaid Worker	0.0190*	0.0130*	-0.0069	0.0240*	0.0187*	-0.0120	0.0142*	0.0070***	-0.0021
	(0.0032)	(0.0033)	(0.0066)	(0.0048)	(0.0054)	(0.0103)	(0.0041)	(0.0038)	(0.0083)
Others	0.0099*	-0.0016	-0.0016	0.0120*	-0.0010	-0.0046	0.0083**	-0.0019	0.0013
	(0.0026)	(0.0025)	(0.0028)	(0.0039)	(0.0040)	(0.0041)	(0.0033)	(0.0028)	(0.0038)

Table 5A-4: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0050*	-0.0063*	-0.0089*	-0.0054**	-0.0074*	-0.0071*	-0.0044**	-0.0052*	-0.0109*
	(0.0015)	(0.0012)	(0.0016)	(0.0022)	(0.0019)	(0.0024)	(0.0021)	(0.0015)	(0.0023)
Junior Secondary	-0.0031	-0.0215*	-0.0279*	-0.0031	-0.0254*	-0.0255*	-0.0031	-0.0176*	-0.0306*
	(0.0019)	(0.0023)	(0.0026)	(0.0028)	(0.0034)	(0.0037)	(0.0025)	(0.0029)	(0.0037)
Senior Secondary	-0.0083*	-0.0287*	-0.0342*	-0.0082**	-0.0369*	-0.0316*	-0.0078**	-0.0202*	-0.0372*
	(0.0023)	(0.0032)	(0.0034)	(0.0035)	(0.0054)	(0.0047)	(0.0031)	(0.0035)	(0.0048)
Tertiary Education	-0.0043	-0.0175*	-0.0322*	-0.0071	-0.0315*	-0.0348*	-0.0019	-0.0126*	-0.0296*
	(0.0043)	(0.0051)	(0.0060)	(0.0072)	(0.0114)	(0.0091)	(0.0051)	(0.0048)	(0.0078)
Spouse's Employment									
Employer	0.0227*	0.0028	-0.0040	0.0181*	0.0032	-0.0038	0.0249*	0.0027	-0.0042
	(0.0019)	(0.0021)	(0.0027)	(0.0030)	(0.0034)	(0.0038)	(0.0025)	(0.0023)	(0.0040)
Employee	-0.0063**	-0.0009	0.0024	-0.0076	-0.0042	-0.0004	-0.0054	0.0014	0.0060
	(0.0031)	(0.0027)	(0.0030)	(0.0048)	(0.0046)	(0.0042)	(0.0038)	(0.0028)	(0.0042)
Casual Worker	0.0127*	0.0097*	0.0057***	0.0142*	0.0141*	0.0041	0.0113*	0.0052***	0.0080***
	(0.0027)	(0.0024)	(0.0030)	(0.0041)	(0.0038)	(0.0043)	(0.0035)	(0.0028)	(0.0041)
Unpaid Worker	0.0138*	0.0013	-0.0040***	0.0154*	0.0027	-0.0074**	0.0121*	0.0005	0.0001
	(0.0018)	(0.0017)	(0.0022)	(0.0027)	(0.0027)	(0.0031)	(0.0024)	(0.0019)	(0.0031)
Others	-0.0152*	-0.0031**	0.0014	-0.0138*	-0.0009	-0.0013	-0.0184*	-0.0053*	0.0047***
	(0.0019)	(0.0015)	(0.0018)	(0.0028)	(0.0025)	(0.0025)	(0.0026)	(0.0018)	(0.0026)
Income (Rp.)									
Household Income	-0.00004	0.0074**	0.0008	-0.0010	-0.0126*	0.0054	0.0016	0.0078	-0.0045
	(0.0038)	(0.0034)	(0.0038)	(0.0068)	(0.0046)	(0.0057)	(0.0042)	(0.0051)	(0.0048)
Square of HH Income	-0.0006	-0.0019	-0.0018	-0.0020	-0.0010	-0.0041	-0.0001	0.0077***	0.0007
	(0.0023)	(0.0019)	(0.0022)	(0.0049)	(0.0019)	(0.0035)	(0.0022)	(0.0042)	(0.0025)
Household Characteristics									
Birth Order	0.0156*	0.0316*	0.0278*	0.0183*	0.0403*	0.0276*	0.0125*	0.0222*	0.0282*
	(0.0012)	(0.0016)	(0.0016)	(0.0017)	(0.0025)	(0.0022)	(0.0015)	(0.0019)	(0.0023)
Child Aged 0-5 years	-0.0113*	-0.0292*	-0.0246*	-0.0126*	-0.0379*	-0.0239*	-0.0098*	-0.0197*	-0.0257*
	(0.0013)	(0.0017)	(0.0017)	(0.0019)	(0.0027)	(0.0024)	(0.0017)	(0.0020)	(0.0025)

Table 5A-4: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0120*	-0.0300*	-0.0251*	-0.0131*	-0.0382*	-0.0244*	-0.0107*	-0.0210*	-0.0262*
	(0.0013)	(0.0017)	(0.0018)	(0.0019)	(0.0027)	(0.0025)	(0.0017)	(0.0020)	(0.0025)
Child Aged 10-14 years	-0.0045*	-0.0174*	-0.0132*	-0.0056*	-0.0229*	-0.0126*	-0.0033**	-0.0114*	-0.0141*
	(0.0010)	(0.0015)	(0.0014)	(0.0015)	(0.0023)	(0.0020)	(0.0013)	(0.0017)	(0.0020)
Child Aged 15-17 years	-0.0022*	0.0002	0.0027*	-0.0030**	-0.0003	0.0034*	-0.0014	0.0007	0.0020
	(0.0008)	(0.0007)	(0.0009)	(0.0012)	(0.0012)	(0.0013)	(0.0010)	(0.0009)	(0.0012)
Number of Adults	-0.0014*	-0.0023*	0.0007	-0.0021*	-0.0041*	0.0011	-0.0007	-0.0005	0.0003
	(0.0005)	(0.0005)	(0.0005)	(0.0007)	(0.0008)	(0.0008)	(0.0006)	(0.0005)	(0.0008)
Rural	0.0138*	0.0010	0.0022	0.0198*	0.0032***	0.0020	0.0079*	-0.0012	0.0020
	(0.0015)	(0.0012)	(0.0013)	(0.0024)	(0.0020)	(0.0019)	(0.0018)	(0.0014)	(0.0032)
Land Ownerships									
Privately Owned: Paddy	-0.0009	-0.0088	0.0029	-0.0004	-0.0140	0.0058	-0.0025	-0.0044	-0.0062
	(0.0039)	(0.0064)	(0.0033)	(0.0051)	(0.0117)	(0.0038)	(0.0072)	(0.0063)	(0.0096)
Privately Owned: Dryland	-0.0007	-0.0020	-0.0004	-0.0001	-0.0067	-0.0005	-0.0007	0.0001	-0.0002
	(0.0022)	(0.0023)	(0.0024)	(0.0032)	(0.0043)	(0.0037)	(0.0029)	(0.0023)	(0.0032)
Privately Owned but managed by others (both paddy and dryland)	0.0045	0.0037	-0.0075	0.0093	0.0002	-0.0008	-0.0021	0.0062	-0.0404
	(0.0056)	(0.0062)	(0.0121)	(0.0067)	(0.0134)	(0.0119)	(0.0103)	(0.0059)	(0.0362)
Community Characteristics									
Dwelling Ownership	-0.0006*	-0.0002**	-0.0003**	-0.0006*	-0.00002	-0.0003***	-0.0007*	-0.0004*	-0.0003
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)
Improved Drinking Water	0.0004*	-0.0001**	-0.0007*	0.0005*	-0.0001	-0.0006*	0.0003*	-0.0002**	-0.0008*
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Number of Schools	0.0047	-0.0175*	-0.0110***	0.0069	-0.0218*	-0.0122	0.0035	-0.0107**	-0.0101
	(0.0048)	(0.0044)	(0.0057)	(0.0073)	(0.0069)	(0.0080)	(0.0063)	(0.0054)	(0.0081)
Student-teacher Ratios	0.0044	0.0161*	0.0120**	0.0043	0.0207*	0.0123	0.0035	0.0092***	0.0121
	(0.0047)	(0.0043)	(0.0056)	(0.0071)	(.0067)	(0.0078)	(0.0063)	(0.0053)	(0.0079)
GRDP	-0.0002*	-0.0002*	-0.0001	-0.0002	-0.0003*	-0.0002	-0.0003*	-0.0002**	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)

Table 5A-4: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Telephone	-0.0020	-0.0009	-0.0021	-0.0064***	-0.0045	0.0012	0.0014	0.0015	-0.0054***
	(0.0023)	(0.0020)	(0.0023)	(0.0038)	(0.0035)	(0.0032)	(0.0026)	(0.0021)	(0.0032)
Computer	0.0025	0.0029	-0.0119**	0.0043	0.0088	-0.0130***	0.0012	-0.0027	-0.0107
	(0.0046)	(0.0039)	(0.0054)	(0.0071)	(0.0061)	(0.0075)	(0.0057)	(0.0046)	(0.0077)
Island									
Sumatera	-0.0184*	-0.0243*	-0.0168*	-0.0170*	-0.0258*	-0.0139**	-0.0194*	-0.0208*	-0.0201*
	(0.0028)	(0.0024)	(0.0037)	(0.0043)	(0.0039)	(0.0054)	(0.0037)	(0.0028)	(0.0051)
Java	-0.0325*	-0.0206*	-0.0029	-0.0349*	-0.0252*	-0.0015	-0.0292*	-0.0147*	-0.0050
	(0.0037)	(0.0029)	(0.0042)	(0.0057)	(0.0048)	(0.0061)	(0.0048)	(0.0034)	(0.0057)
Lesser Sunda Islands	-0.0101*	-0.0144*	-0.0038	-0.0087***	-0.0160*	0.0009	-0.0113*	-0.0113*	-0.0100***
	(0.0031)	(0.0026)	(0.0039)	(0.0046)	(0.0042)	(0.0057)	(0.0039)	(0.0029)	(0.0054)
Kalimantan	-0.0216*	-0.0149*	-0.0043	-0.0227*	-0.0144*	-0.0020	-0.0201*	-0.0135*	-0.0069
	(0.0029)	(0.0023)	(0.0036)	(0.0044)	(0.0037)	(0.0052)	(0.0037)	(0.0026)	(0.0048)
Sulawesi	-0.0107*	-0.0109*	0.0049	-0.0070***	-0.0089**	0.0070	-0.0149*	-0.0123*	0.0026
	(0.0028)	(0.0022)	(0.0035)	(0.0042)	(0.0037)	(0.0052)	(0.0036)	(0.0025)	(0.0047)
Maluku	-0.0348*	-0.0276*	-0.0098**	-0.0388*	-0.0238*	-0.0087	-0.0298*	-0.0348*	-0.0110
	(0.0054)	(0.0039)	(0.0050)	(0.0083)	(0.0058)	(0.0071)	(0.0067)	(0.0067)	(0.0069)
Chi Squared	8212.52 (*d.f* 141)			4783.86 (*d.f* 138)			3513.58 (*d.f* 138)		
Pseudo R-Squared	0.1262			0.1250			0.1324		
Number of Observations	102,325			53,370			48,956		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5A-5: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region and Region-Gender, SUSENAS 2005.

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	0.0003	-0.0111*	-0.0030**	-0.0101*	-0.0148*	-0.0045*	-	-	-
	(0.0009)	(0.0017)	(0.0015)	(0.0013)	(0.0012)	(0.0013)			
Biological Child	-0.0054*	-0.0051*	-0.0021	-0.0014	-0.0041***	0.0002	0.0013	-0.0109*	-0.0080***
	(0.0016)	(0.0003)	(0.0031)	(0.0028)	(0.0024)	(0.0029)	(0.0030)	(0.0026)	(0.0041)
Household Head's Characteristics									
Age	-0.00005	-0.0001	0.0001	0.0002**	0.0001	0.0001	0.00002	-0.0002	0.0001
	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0070	0.0213	0.0212	-0.3708	0.0331	0.0097	-0.0910	0.0396	-0.3148
	(0.0070)	(0.0152)	(0.0142)	(0.4386)	(0.9518)	(0.7422)	(0.6231)	(0.2476)	(0.5874)
Household Head's Education									
Completed Primary	-0.0033	-0.0124*	-0.0095*	-0.0078*	-0.0112*	-0.0041***	-0.0013	-0.0026	-0.0105**
	(0.0022)	(0.0040)	(0.0031)	(0.0023)	(0.0017)	(0.0023)	(0.0029)	(0.0032)	(0.0044)
Junior Secondary	-0.0051**	-0.0234*	-0.0252*	-0.0046***	-0.0304*	-0.0202*	-0.0052	-0.0121*	-0.0264*
	(0.0025)	(0.0024)	(0.0039)	(0.0027)	(0.0029)	(0.0033)	(0.0034)	(0.0040)	(0.0056)
Senior Secondary	-0.0051**	-0.0372*	-0.0248*	-0.0070**	-0.0318*	-0.0265*	-0.0044	-0.0133*	-0.0282*
	(0.0025)	(0.0039)	(0.0040)	(0.0031)	(0.0038)	(0.0041)	(0.0034)	(0.0043)	(0.0058)
Tertiary Education	-0.0055***	-0.0251*	-0.0242*	-0.0103***	-0.0394*	-0.0301*	-0.0027	-0.0126***	-0.0276*
	(0.0031)	(0.0040)	(0.0055)	(0.0057)	(0.0106)	(0.0082)	(0.0041)	(0.0068)	(0.0078)
Household Head's Employment									
Employer	0.0008	0.0071*	-0.0055**	0.0118*	0.0072*	-0.0020	0.0023	0.0054**	-0.0036
	(0.0013)	(0.0026	(0.0024)	(0.0018)	(0.0015)	(0.0017)	(0.0017)	(0.0022)	(0.0033)
Employee	-0.0028**	-0.0022*	-0.0047**	0.0039	-0.0028	0.0039	-0.0022	-0.0055**	-0.0072**
	(0.0014)	(0.0015)	(0.0022)	(0.0031)	(0.0029)	(0.0030)	(0.0020)	(0.0026)	(0.0032)
Casual Worker	-0.0018	0.0062	0.0034	0.0065**	0.0027	0.0039	-0.0022	0.0026	0.00001
	(0.0020)	(0.0064)	(0.0025)	(0.0031)	(0.0024)	(0.0025)	(0.0028)	(0.0029)	(0.0040)
Unpaid Worker	-0.0113***	0.0016	-0.0028	0.0305*	0.0165*	-0.0082	-0.1002	0.0086	0.0109
	(0.0069)	(0.0112)	(0.0112)	(0.0044)	(0.0044)	(0.0083)	(0.9118)	(0.2989)	(0.4540)
Others	-0.0008	0.0042	-0.0063***	0.0175*	-0.0001	0.0018	0.00005	-0.0015	-0.0090
	(0.0021)	(0.0038)	(0.0036)	(0.0038)	(0.0037)	(0.0039)	(0.0029)	(0.0038)	(0.0053)

Table 5A-5: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	0.0017	-0.0107*	-0.0068**	-0.0074*	-0.0073*	-0.0103*	-0.0001	-0.0046***	-0.0067***
	(0.0021)	(0.0035)	(0.0028)	(0.0021)	(0.0016)	(0.0021)	(0.0026)	(0.0027)	(0.0040)
Junior Secondary	0.0012	-0.0228*	-0.0190*	-0.0042	-0.0286*	-0.0331*	-0.0029	-0.0121*	-0.0164*
	(0.0024)	(0.0043)	(0.0036)	(0.0027)	(0.0034)	(0.0036)	(0.0031)	(0.0036)	(0.0051)
Senior Secondary	-0.0015	-0.0383*	-0.0242*	-0.0099*	-0.0374*	-0.0399*	-0.0034	-0.0209*	-0.0210*
	(0.0025)	(0.0049)	(0.0041)	(0.0034)	(0.0055)	(0.0052)	(0.0032)	(0.0049)	(0.0058)
Tertiary Education	-0.0011	-0.0198*	-0.0236*	0.0004	-0.0410*	-0.0341*	-0.0109***	-0.0116	-0.0218**
	(0.0034)	(0.0062)	(0.0061)	(0.0068)	(0.0135)	(0.0106)	(0.0058)	(0.0073)	(0.0087)
Spouse's Employment									
Employer	0.0156*	0.0111*	0.0043	0.0241*	0.0023	-0.0081**	0.0151*	0.0057	0.0073
	(0.0019)	(0.0042)	(0.0038)	(0.0028)	(0.0028)	(0.0037)	(0.0028)	(0.0040)	(0.0054)
Employee	-0.0006	0.0050	0.0040	-0.0098**	0.0049	-0.0007	0.0016	-0.0080***	0.0041
	(0.0022)	(0.0037)	(0.0033)	(0.0048)	(0.0040)	(0.0046)	(0.0032)	(0.0048)	(0.0047)
Casual Worker	0.0088*	0.0131*	0.0023	0.0131*	0.0095*	0.0069***	0.0081**	0.0136*	0.0019
	(0.0025)	(0.0055)	(0.0048)	(0.0039)	(0.0033)	(0.0039)	(0.0038)	(0.0042)	(0.0074)
Unpaid Worker	0.0067*	0.0063	-0.0010	0.0156*	0.0006	-0.0051***	0.0072**	0.0019	-0.0010
	(0.0020)	(0.0042)	(0.0041)	(0.0026)	(0.0023)	(0.0028)	(0.0028)	(0.0038)	(0.0055)
Others	-0.0037**	0.0038	0.0004	-0.0217*	-0.0048**	0.0019	-0.0004	0.0029	-0.0002
	(0.0017)	(0.0027)	(0.0023)	(0.0028)	(0.0022)	(0.0025)	(0.0024)	(0.0027)	(0.0034)
Income (Rp.)									
Household Income	0.0034	-0.0250*	0.0027	-0.0046	0.0045	0.0055	0.0018	-0.0126**	0.0062
	(0.0026)	(0.0044)	(0.0033)	(0.0056)	(0.0043)	(0.0073)	(0.0035)	(0.0049)	(0.0048)
Square of HH Income	-0.0010	0.0095*	-0.0003	0.0008	0.0011	0.0105***	-0.0005	-0.0041	0.0062
	(0.0014)	(0.0024)	(0.0013)	(0.0031)	(0.0017)	(0.0056)	(0.0019)	(0.0030)	(0.0048)
Household Characteristics									
Birth Order	0.0061*	0.0352*	0.0221*	0.0205*	0.0392*	0.0308*	0.0065*	0.0183*	0.0220*
	(0.0013)	(0.0021)	(0.0025)	(0.0016)	(0.0022)	(0.0021)	(0.0017)	(0.0031)	(0.0035)
Child Aged 0-5 years	-0.0045*	-0.0147*	-0.0180*	-0.0150*	-0.0370*	-0.0282*	-0.0046**	-0.0172*	-0.0177*
	(0.0014)	(0.0034)	(0.0027)	(0.0018)	(0.0023)	(0.0023)	(0.0018)	(0.0033)	(0.0038)

Table 5A-5: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0051*	-0.0115*	-0.0189*	-0.0154*	-0.0372*	-0.0284*	-0.0046**	-0.0176*	-0.0170*
	(0.0014)	(0.0035)	(0.0027)	(0.0018)	(0.0023)	(0.0023)	(0.019)	(0.0033)	(0.0038)
Child Aged 10-14 years	-0.0020***	-0.0064*	-0.0120*	-0.0060*	-0.0214*	-0.0139*	-0.0014	-0.0116*	-0.0129*
	(0.0011)	(0.0033)	(0.0022)	(0.0014)	(0.0020)	(0.0018)	(0.0015)	(0.0029)	(0.0031)
Child Aged 15-17 years	-0.0010	0.0052	0.0023***	-0.0032*	-0.0003	0.0029**	-0.0008	0.0005	0.0035***
	(0.0008)	(0.0046)	(0.0013)	(0.0011)	(0.0010)	(0.0012)	(0.0011)	(0.0013)	(0.0018)
Number of Adults	-0.0020*	-0.0021*	0.0001	-0.0011	-0.0036*	0.0012	-0.0018**	-0.0014	-0.0005
	(0.0005)	(0.0008)	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0007)	(0.0008)	(0.0011)
Rural	-	-	-	-	-	-	-	-	-
Land Ownerships									
Privately Owned: Paddy	-0.0031	-0.0066	-0.0044	-0.0011	-0.0100	0.0042	0.0003	-0.0135	0.0012
	(0.0013)	(0.0139)	(0.0128)	(0.0050)	(0.0081)	(0.0038)	(0.0113)	(0.0264)	(0.0162)
Privately Owned: Dryland	-0.0111	-0.0179	0.0030	-0.0003	-0.0022	-0.0001	-0.0223	-0.0006	-0.0201
	(0.0096)	(0.0141)	(0.0089)	(0.0029)	(0.0028)	(0.0027)	(0.0162)	(0.0121)	(0.0251)
Privately Owned but managed by others (both paddy and dryland)	-0.0166	0.0066	-0.0208	0.0066	0.0041	-0.0072	-0.0614	0.0144	-0.0466
	(0.0425)	(0.0313)	(0.0484)	(0.0073)	(0.0078)	(0.0134)	(0.1073)	(0.0284)	(0.1100)
Community Characteristics									
Dwelling Ownership	0.0001	-0.0007*	-0.0001	-0.0011*	-0.0002	-0.0007*	0.0001	-0.0002	0.00003
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)
Improved Drinking Water	0.00001	-0.0001	-0.0005*	0.0006*	-0.0002**	-0.0008*	0.0001	-0.0001	-0.0006*
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Number of Schools	-0.0056	-0.0006	-0.0012	0.0086	-0.0235*	-0.0199*	0.0014	-0.0008	-0.0166
	(0.0053)	(0.0016)	(0.0094)	(0.0069)	(0.0061)	(0.0074)	(0.0070)	(0.0087)	(0.0133)
Student-teacher Ratios	0.0073	0.0007	0.0053	0.0035	0.0227*	0.0193*	0.0002	0.0001	0.0215
	(0.0053)	(0.0005)	(0.0093)	(0.0068)	(0.0060)	(0.0072)	(0.0069)	(0.0085)	(0.0132)
GRDP	-0.0001	-0.0002*	0.0002	-0.0004*	-0.0004*	-0.0001	-0.0001	-0.00003	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)

Table 5A-5: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban Boys		
	Urban			Rural					
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Telephone	0.0014	0.0002	-0.0046**	-0.0085***	-0.0062	0.0044	0.0011	-0.0002	-0.0028
	(0.0011)	(0.0023)	(0.0022)	(0.0045)	(0.0042)	(0.0038)	(0.0016)	(0.0022)	(0.0031)
Computer	0.0200	0.0018	-0.0057	-0.0108	0.0022	-0.0166	0.0022	0.0038	-0.0038
	(0.0019)	(0.0039)	(0.0045)	(0.0130)	(0.0092)	(0.0118)	(0.0026)	(0.0037)	(0.0061)
Island									
Sumatera	-0.0132	0.0313*	-0.0232	-0.0230*	-0.0340*	-0.0198*	-0.0106	0.0486	-0.0389
	(0.1037)	(0.0128)	(0.2972)	(0.0040)	(0.0032)	(0.0047)	(0.1673)	(0.1156)	(0.0455)
Java	-0.0173	0.0423*	-0.0243	-0.0402*	-0.0282*	0.0048	-0.0150	0.0346	-0.0446
	(0.1037)	(0.0130)	(0.2972)	(0.0055)	(0.0041)	(0.0054)	(0.1674)	(0.1023)	(0.0432)
Lesser Sunda Islands	-0.0087	0.0347*	-0.0170	-0.0118*	-0.0214*	-0.0002	-0.0060	0.0506	-0.0279
	(0.1037)	(0.0131)	(0.2972)	(0.0044)	(0.0035)	(0.0050)	(0.1673)	(0.2334)	(0.0543)
Kalimantan	-0.0111	0.0437*	-0.0180	-0.0281*	-0.0211*	-0.0027	-0.0105	0.0496	-0.0275
	(0.1037)	(0.0130)	(0.2972)	(0.0041)	(0.0030)	(0.0044)	(0.0673)	(0.2245)	(0.0112)
Sulawesi	-0.0095	0.0406*	-0.0085	-0.0128*	-0.0175*	0.0077***	-0.0082	0.0572	-0.0196
	(0.1037)	(0.0129)	(0.2973)	(0.0041)	(0.0031)	(0.0045)	(0.0556)	(0.6572)	(0.0455)
Maluku	-0.0119	0.0047	-0.0259	-0.0485*	-0.0362*	-0.0078	-0.0147	0.0467	-0.0437
	(0.1038)	(0.0152)	(0.2974)	(0.0078)	(0.0053)	(0.0062)	(0.1674)	(0.0764)	(0.0554)
Chi Squared	1733.73 (*d.f* 138)			5915.78(*d.f* 138)			956.49 (*d.f* 135)		
Pseudo R-Squared	0.1282			0.1170			0.1307		
Number of Observations	34,900			67,425			17,947		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5A-6: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region-Gender, SUSENAS 2005.

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-	-	-	-	-	-	-	-	-
Biological Child	-0.0098*	-0.0097*	0.0062	-0.0021	-0.0016	-0.0001	-0.0017	-0.0063**	0.0004
	(0.0021)	(0.0019)	(0.0050)	(0.0041)	(0.0040)	(0.0042)	(0.0036)	(0.0026)	(0.0041)
Household Head's Characteristics									
Age	-0.0001	-0.0001	0.00003	0.0004*	0.0002**	0.0002***	-0.00004	-0.0001	-0.00004
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	0.0093	-0.0049	0.0309**	-0.0868	0.0466	0.0298	-0.2616	0.0243	-0.3366
	(0.0076)	(0.0030)	(0.0142)	(0.1946)	(0.0418)	(0.0392)	(0.2594)	(0.5754)	(0.6123)
Household Head's Education									
Completed Primary	-0.0057***	-0.0029	-0.0092**	-0.0081**	-0.0140*	-0.0071**	-0.0075**	-0.0084*	-0.0008
	(0.0034)	(0.0026)	(0.0042)	(0.0034)	(0.0028)	(0.0033)	(0.0030)	(0.0020)	(0.0033)
Junior Secondary	-0.0052	-0.0020	-0.0248*	-0.0067	-0.0360*	-0.0273*	-0.0025	-0.0250*	-0.0129*
	(0.0037)	(0.0028)	(0.0055)	(0.0041)	(0.0045)	(0.0048)	(0.0035)	(0.0038)	(0.0044)
Senior Secondary	-0.0059	-0.0085*	-0.0217*	-0.0065	-0.0452*	-0.0288*	-0.0077***	-0.0177*	-0.0246*
	(0.0028)	(0.0027)	(0.0055)	(0.0046)	(0.0062)	(0.0057)	(0.0041)	(0.0041)	(0.0059)
Tertiary Education	-0.0084***	-0.0086**	-0.0212*	-0.0163***	-0.0668*	-0.0361*	-0.0049	-0.0163***	-0.0233**
	(00047)	(0.0035)	(0.0077)	(0.0091)	(0.0213)	(0.0124)	(0.0069)	(0.0096)	(0.0109)
Household Head's Employment									
Employer	-0.0010	-0.0014	-0.0084**	0.0151*	0.0116*	-0.0014	0.0083*	0.0025	-0.0026
	(0.0019)	(0.0024)	(0.0037)	(0.0027)	(0.0024)	(0.0025)	(0.0024)	(0.0018)	(0.0024)
Employee	-0.0035***	-0.0019	-0.0023	0.0044	-0.0035	0.0058	0.0038	-0.0021	0.0017
	(0.0020)	(0.0022)	(0.0030)	(0.0049)	(0.0047)	(0.0042)	(0.0039)	(0.0034)	(0.0041)
Casual Worker	-0.0012	-0.0041	0.0052	0.0035	0.0050	0.0034	0.0087**	0.0006	0.0047
	(0.0028)	(0.0034)	(0.0032)	(0.0049)	(0.0039)	(0.0036)	(0.0038)	(0.0029)	(0.0034)
Unpaid Worker	-0.0058	-0.0028	-0.0272	0.0375*	0.0244*	-0.0213	0.0238*	0.0087***	0.0017
	(0.0892)	(0.0085)	(0.4258)	(0.0067)	(0.0072)	(0.0147)	(0.0056)	(0.0047)	(0.0096)
Others	-0.0016	-0.0025	-0.0041	0.0199*	-0.0007	-0.0018	0.0154*	0.0004	0.0053
	(0.0032)	(0.0030)	(0.0050)	(0.0057)	(0.0059)	(0.0057)	(0.0048)	(0.0041)	(0.0052)

Table 5A-6: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	0.0043	-0.0027	-0.0069***	-0.0077**	-0.0087*	-0.0079*	-0.0071**	-0.0058*	-0.0129*
	(0.0036)	(0.0030)	(0.0038)	(0.0031)	(0.0026)	(0.0030)	(0.0028)	(0.0019)	(0.0029)
Junior Secondary	0.0059	-0.0041	-0.0225*	-0.0027	-0.0334*	-0.0320*	-0.0059***	-0.0244*	-0.0342*
	(0.0039)	(0.0030)	(0.0053)	(0.0040)	(0.0051)	(0.0051)	(0.0035)	(0.0046)	(0.0050)
Senior Secondary	0.0011	-0.0024	-0.0279*	-0.0103**	-0.0434*	-0.0399*	-0.0089**	-0.0311*	-0.0398*
	(0.0042)	(0.0025)	(0.0059)	(0.0050)	(0.0084)	(0.0073)	(0.0044)	(0.0071)	(0.0072)
Tertiary Education	0.0063	-0.0071**	-0.0252*	0.0066	-0.0632**	-0.0525**	-0.0040	-0.0281**	-0.0239***
	(0.0049)	(0.0034)	(0.0086)	(0.0108)	(0.0302)	(0.0203)	(0.0082)	(0.0117)	(0.0123)
Spouse's Employment									
Employer	0.0166*	0.0014	0.0009	0.0175*	0.0012	-0.0093***	0.0276*	0.0034	-0.0064
	(0.0026)	(0.0038)	(0.0054)	(0.0044)	(0.0047)	(0.0050)	(0.0035)	(0.0031)	(0.0055)
Employee	-0.0027	0.0022	0.0042	-0.0147***	0.0031	-0.0052	-0.0055	0.0063	0.0050
	(0.0031)	(0.0029)	(0.0046)	(0.0075)	(0.0065)	(0.0066)	(0.0059)	(0.0043)	(0.0066)
Casual Worker	0.0096*	-0.0022	0.0019	0.0156*	0.0136**	0.0038	0.0105**	0.0051	0.0109**
	(0.0034)	(0.0057)	(0.0061)	(0.0059)	(0.0053)	(0.0055)	(0.0050)	(0.0038)	(0.0055)
Unpaid Worker	0.0068**	-0.0028	-0.0008	0.0177*	0.0012	-0.0100**	0.0131*	0.0001	0.0009
	(0.0029)	(0.0085)	(0.0061)	(0.0039)	(0.0038)	(0.0039)	(0.0034)	(0.0026)	(0.0042)
Others	-0.0076*	-0.0024	0.0007	-0.0216*	-0.0038	-0.0025	-0.0242*	-0.0062**	0.0072***
	(0.0025)	(0.0036)	(0.0032)	(0.0040)	(0.0036)	(0.0034)	(0.0039)	(0.0025)	(0.0037)
Income (Rp.)									
Household Income	0.0054	0.0003	-0.0013	-0.0043	0.0063	0.0158	-0.0013	0.0071	-0.0048
	(0.0038)	(0.0019)	(0.0049)	(0.0114)	(0.0070)	(0.0109)	(0.0055)	(0.0081)	(0.0093)
Square of HH Income	-0.0015	0.0001	0.0006	-0.0023	0.0034	0.0194**	0.0009	-0.0059	-0.0021
	(0.0021)	(0.0002)	(0.0020)	(0.0088)	(0.0026)	(0.0090)	(0.0018)	(0.0064)	(0.0064)
Household Characteristics									
Birth Order	0.0054*	0.0032*	0.0220*	0.0243*	0.0513*	0.0305*	0.0162*	0.0261*	0.0314*
	(0.0020)	(0.0019)	(0.0035)	(0.0025)	(0.0034)	(0.0028)	(0.0021)	(0.0025)	(0.0030)
Child Aged 0-5 years	-0.0043**	-0.0102*	-0.0180*	-0.0168*	-0.0484*	-0.0271*	-0.0129*	-0.0246*	-0.0298*
	(0.0021)	(0.0021)	(0.0037)	(0.0027)	(0.0036)	(0.0031)	(0.0023)	(0.0027)	(0.0033)

Table 5A-6: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0058*	0.0001	-0.0209*	-0.0175*	-0.0486*	-0.0281*	-0.0131*	-0.0248*	-0.0289*
	(0.0022)	(0.0019)	(0.0038)	(0.0028)	(0.0037)	(0.0032)	(0.0024)	(0.0027)	(0.0033)
Child Aged 10-14 years	-0.0025	-0.0018*	-0.0111*	-0.0079*	-0.0287*	-0.0125*	-0.0040**	-0.0134*	-0.0157*
	(0.0017)	(0.0009)	(0.0031)	(0.0022)	(0.0031)	(0.0025)	(0.0018)	(0.0022)	(0.0026)
Child Aged 15-17 years	-0.0011	0.0003	0.0009	-0.0043**	-0.0010	0.0033**	-0.0020	0.0003	0.0024
	(0.0012)	(0.0004)	(0.0018)	(0.0017)	(0.0016)	(0.0017)	(0.0014)	(0.0011)	(0.0016)
Number of Adults	-0.0022*	0.0005	0.0008	-0.0023**	-0.0055*	0.0020**	0.0002	-0.0015***	0.0002
	(0.0008)	(0.0012)	(0.0010)	(0.0011)	(0.0011)	(0.0010)	(0.0009)	(0.0008)	(0.0010)
Rural	-	-	-	-	-	-	-	-	-
Land Ownerships									
Privately Owned: Paddy	-0.0078	-0.0070	-0.0077	-0.0008	0.0160	0.0072	-0.0022	-0.0039	-0.0062
	(0.0247)	(0.0109)	(0.0209)	(0.0067)	(0.0150)	(0.0044)	(0.0092)	(0.0075)	(0.0115)
Privately Owned: Dryland	-0.0035	-0.0038	0.0071	0.0009	-0.0083	0.0009	-0.0010	0.0001	-0.0008
	(0.0107)	(0.0206)	(0.0071)	(0.0042)	(0.0055)	(0.0040)	(0.0038)	(0.0026)	(0.0038)
Privately Owned but managed by others (both paddy and dryland)	0.0007	0.0005	-0.0018	0.0132	-0.0020	0.00004	-0.0025	0.0082	-0.0552
	(0.0381)	(0.0324)	(0.0344)	(0.0089)	(0.0185)	(0.0128)	(0.0137)	(0.0069)	(0.0467)
Community Characteristics									
Dwelling Ownership	0.0001	-0.0003*	-0.0001	-0.0010*	0.0001	-0.0007*	-0.0012*	-0.0006*	
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	
Improved Drinking Water	-0.0002	-0.00003	-0.0005*	0.0007	-0.0002	-0.0006*	0.0005*	-0.0003*	
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	
Number of Schools	-0.0131	-0.0031***	0.0193	0.0088	-0.0314*	-0.0131	0.0106	-0.0130***	
	(0.0082)	(0.0017)	(0.0135)	(0.0105)	(0.0096)	(0.0103)	(0.0089)	(0.0072)	
Student-teacher Ratios	0.0151***	0.0007*	-0.0163	0.0063	0.0303*	0.0109	-0.0019	0.0126***	
	(0.0083)	(0.0003)	(0.0133)	(0.0102)	(0.0094)	(0.0101)	(0.0088)	(0.0071)	
GRDP	-0.00002	-0.0003*	0.0003**	-0.0002	-0.0005*	-0.0003***	-0.0005*	-0.0004*	
	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	

Table 5A-6: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 10-14 years by Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Telephone	0.0014	0.0023	-0.0064**	-0.0185**	-0.0139**	0.0078	-0.0009	0.0013	0.0011
	(0.0017)	(0.0038)	(0.0031)	(0.0076)	(0.0070)	(0.0053)	(0.0049)	(0.0043)	(0.0055)
Computer	0.0020	0.0046	-0.0087	-0.0055	0.0105	-0.0298	-0.0188	-0.0099	-0.0033
	(0.0028)	(0.0051)	(0.0070)	(0.0179)	(0.0133)	(0.0191)	(0.0207)	(0.0144)	(0.0145)
Island									
Sumatera	-0.0168	-0.0252*	0.0072	-0.0220*	-0.0370*	-0.0108	-0.0229*	-0.0276*	-0.0298*
	(0.0124)	(0.0063)	(0.0572)	(0.0060)	(0.0053)	(0.0069)	(0.0050)	(0.0037)	(0.0063)
Java	-0.0206	-0.0147*	0.0109	-0.0445*	-0.0328*	0.0137***	-0.0343*	-0.0205*	-0.0054
	(0.0954)	(0.0065)	(0.0212)	(0.0083)	(0.0067)	(0.0079)	(0.0071)	(0.0047)	(0.0072)
Lesser Sunda Islands	-0.0118	-0.0065	0.0061	-0.0102	-0.0244*	0.0084	-0.0132**	-0.0151*	-0.0106
	(0.0345)	(0.0061)	(0.0163)	(0.0067)	(0.0057)	(0.0074)	(0.0058)	(0.0041)	(0.0068)
Kalimantan	-0.0129	-0.0237*	0.0041	-0.0305*	-0.0208*	0.0022	-0.0255*	-0.0179*	-0.0077
	(0.0241)	(0.0063)	(0.0211)	(0.0063)	(0.0050)	(0.0067)	(0.0051)	(0.0034)	(0.0058)
Sulawesi	-0.0117	-0.0178*	0.0154	-0.0076	-0.0160*	0.0131***	-0.0187*	-0.0163*	0.0019
	(0.0132)	(0.0063)	(0.0114)	(0.0061)	(0.0051)	(0.0067)	(0.0053)	(0.0035)	(0.0058)
Maluku	-0.0072	-0.0306	0.0084	-0.0525*	-0.0339*	-0.0035	-0.0432*	-0.0392*	-0.0122
	(0.0221)	(0.0135)	(0.0707)	(0.0119)	(0.0079)	(0.0089)	(0.0099)	(0.0081)	(0.0085)
Chi Squared	968.57 (*d.f* 135)			3338.32 (*d.f* 135)			2542.21 (*d.f* 135)		
Pseudo R-Squared	0.1562			0.1105			0.1267		
Number of Observations	16,953			35,401			32,024		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5A-7: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 years and by Gender, SUSENAS 2005.

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-0.0119*	-0.0778*	-0.0030	0.0130*	-	-	-	-	-
	(0.0017)	(0.0032)	(0.0023)	(0.0035)					
Biological Child	-0.0195*	-0.1454*	-0.0204*	-0.0105**	-0.0908*	-0.0190*	-0.0241*	-0.0165*	-0.0220*
	(0.0030)	(0.0055)	(0.0044)	(0.0049)	(0.0090)	(0.0062)	(0.0036)	(0.0063)	(0.0063)
Household Head's Characteristics									
Age	0.0002**	-0.0017*	-0.0005*	0.0005*	-0.0013*	-0.0003	-0.00003	-0.0020*	-0.0008*
	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0003)	(0.0002)	(0.0001)	(0.0003)	(0.0002)
Female Headed	-0.0028	0.1564	0.1005	-0.1484	0.1801	0.1070	-0.1039	0.1384	0.0880
	(0.0204)	(0.3406)	(0.6792)	(0.1785)	(0.2557)	(0.2637)	(0.1585)	(0.2194)	(0.1658)
Household Head's Education									
Completed Primary	-0.0086**	-0.0418*	-0.0084***	-0.0102**	-0.0443*	-0.0025	-0.0053	-0.0399*	-0.0149**
	(0.0035)	(0.0060)	(0.0044)	(0.0047)	(0.0086)	(0.0062)	(0.0052)	(0.0082)	(0.0064)
Junior Secondary	-0.0051	-0.1358*	-0.0321*	-0.0040	-0.1472*	-0.0252*	-0.0049	-0.1198*	-0.0402*
	(0.0041)	(0.0077)	(0.0055)	(0.0056)	(0.0108)	(0.0077)	(0.0059)	(0.0106)	(0.0080)
Senior Secondary	-0.0016	-0.1850*	-0.0460*	-0.0008	-0.2097*	-0.0340*	0.0002	-0.1502*	-0.0606*
	(0.0044)	(0.0092)	(0.0065)	(0.0062)	(0.0132)	(0.0089)	(0.0084)	(0.0122)	(0.0095)
Tertiary Education	-0.0075	-0.1502*	-0.0595*	-0.0122	-0.3042*	-0.0409*	-0.0059	-0.0981*	-0.0630*
	(0.0067)	(0.0138)	(0.0107)	(0.0112)	(0.0297)	(0.0157)	(0.0045)	(0.0158)	(0.0148)
Household Head's Employment									
Employer	0.0136*	0.0435*	-0.0099*	0.0186*	0.0553*	-0.0147*	0.0064**	0.0207*	-0.0027
	(0.0024)	(0.0043)	(0.0031)	(0.0035)	(0.0061)	(0.0043)	(0.0033)	(0.0058)	(0.0044)
Employee	-0.0035	-0.0167*	-0.0025	-0.0020	-0.0053	-0.0060	-0.0045	-0.0235*	0.0013
	(0.0035)	(0.0061)	(0.0042)	(0.0053)	(0.0092)	(0.0059)	(0.0044)	(0.0076)	(0.0061)
Casual Worker	0.0063	0.0308*	0.0099**	0.0098***	0.0486*	0.0139**	0.0021	0.0090	0.0053
	(0.0041)	(0.0065)	(0.0043)	(0.0060)	(0.0093)	(0.0058)	(0.0055)	(0.0089)	(0.0063)
Unpaid Worker	0.0149***	-0.0115	0.0087	0.0110	0.0010	0.0174	0.0186***	-0.0326	-0.0030
	(0.0082)	(0.0197)	(0.0132)	(0.0127)	(0.0281)	(0.0169)	(0.0101)	(0.0266)	(0.0217)
Others	-0.0004	0.0365*	0.0117**	-0.0015	0.0523*	0.0136***	0.0014	0.0209***	0.0082
	(0.0051)	(0.0084)	(0.0057)	(0.0076)	(0.0121)	(0.0077)	(0.0065)	(0.0109)	(0.0086)

Table 5A-7: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0025	-0.0391*	-0.0177*	0.0002	-0.0393*	-0.0154*	-0.0059	-0.0386*	-0.0200*
	(0.0031)	(0.0053)	(0.0038)	(0.0043)	(0.0075)	(0.0052)	(0.0045)	(0.0072)	(0.0055)
Junior Secondary	0.0036	-0.1262*	-0.0480*	0.0090	-0.1406*	-0.0488*	-0.0031	-0.1040*	-0.0465*
	(0.0039)	(0.0077)	(0.0055)	(0.0055)	(0.0110)	(0.0077)	(0.0055)	(0.0105)	(0.0079)
Senior Secondary	-0.0010	-0.1677*	-0.0574*	-0.0005	-0.2095*	-0.0445*	-0.0017	-0.1162*	-0.0715*
	(0.0046)	(0.0103)	(0.0072)	(0.0069)	(0.0156)	(0.0096)	(0.0062)	(0.0129)	(0.0107)
Tertiary Education	-0.0078	-0.1023*	-0.0908*	0.0077	-0.2960*	-0.0700*	-0.0130	-0.0509*	-0.0897*
	(0.0079)	(0.0154)	(0.0142)	(0.0132)	(0.0382)	(0.0210)	(0.0095)	(0.0169)	(0.0193)
Spouse's Employment									
Employer	0.0320*	0.0328*	-0.0156**	0.0321*	0.0145	-0.0196**	0.0312*	0.0502*	-0.0084
	(0.0035)	(0.0079)	(0.0063)	(0.0052)	(0.0117)	(0.0084)	(0.0046)	(0.0098)	(0.0097)
Employee	-0.0149*	0.0290*	0.0044	-0.0202**	0.0367*	-0.0040	-0.0110***	0.0179	0.0173
	(0.0053)	(0.0091)	(0.0069)	(0.0083)	(0.0140)	(0.0093)	(0.0064)	(0.0110)	(0.0105)
Casual Worker	0.0081	0.0654*	0.0158**	-0.0054	0.0807*	0.0048	0.0199*	0.0450*	0.0333*
	(0.0056)	(0.0100)	(0.0071)	(0.0089)	(0.0145)	(0.0097)	(0.0069)	(0.0130)	(0.0106)
Unpaid Worker	0.0199*	0.0388*	-0.0015	0.0221*	0.0428*	-0.0100	0.0174*	0.0344*	0.0114
	(0.0033)	(0.0066)	(0.0050)	(0.0048)	(0.0095)	(0.0067)	(0.0045)	(0.0088)	(0.0077)
Others	-0.0257*	0.0048	0.0214*	-0.0256*	0.0178**	0.0108**	-0.0284*	-0.0111	0.0370*
	(0.0033)	(0.0058)	(0.0042)	(0.0047)	(0.0084)	(0.0055)	(0.0045)	(0.0076)	(0.0065)
Income (Rp.)									
Household Income	0.0007	-0.0553*	0.0008	-0.0001	-0.0430*	0.0101	-0.0023	-0.0559*	-0.0047
	(0.0060)	(0.0102)	(0.0085)	(0.0097)	(0.0156)	(0.0111)	(0.0067)	(0.0126)	(0.0137)
Square of HH Income	-0.0010	0.0123**	0.0092***	-0.0022	-0.0054	-0.0082	-0.0002	0.0109***	-0.0161
	(0.0033)	(0.0052)	(0.0052)	(0.0058)	(0.0079)	(0.0063)	(0.0033)	(0.0065)	(0.0098)
Household Characteristics									
Birth Order	0.0034	0.1383*	0.0113**	-0.0010	0.1663*	0.0057	0.0079***	0.1052*	0.0186**
	(0.0034)	(0.0070)	(0.0049)	(0.0050)	(0.0101)	(0.0067)	(0.0046)	(0.0092)	(0.0072)
Child Aged 0-5 years	-0.0009	-0.1093*	-0.0084	0.0033	-0.1314*	-0.0058	-0.0053	-0.0849*	-0.0124
	(0.0037)	(0.0074)	(0.0053)	(0.0054)	(0.0107)	(0.0073)	(0.0050)	(0.0098)	(0.0077)

Table 5A-7: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0003	-0.1207*	-0.0078	0.0038	-0.1482*	-0.0034	-0.0046	-0.0883*	-0.0138***
	(0.0037)	(0.0074)	(0.0053)	(0.0054)	(0.0108)	(0.0073)	(0.0049)	(0.0098)	(0.0077)
Child Aged 10-14 years	0.0023	-0.1247*	-0.0079	0.0066	-0.1510*	-0.0010	-0.0019	-0.0931*	-0.0166**
	(0.0036)	(0.0073)	(0.0052)	(0.0052)	(0.0105)	(0.0071)	(0.0048)-	(0.0096)	(0.0075)
Child Aged 15-17 years	0.0014	-0.0658*	-0.0031	0.0043	-0.0775*	0.0026	0.0011	-0.0492*	-0.0102***
	(0.0025)	(0.0055)	(0.0036)	(0.0036)	(0.0080)	(0.0050)	(0.0034)	(0.0072)	(0.0053)
Number of Adults	-0.0031*	-0.0113*	0.0023**	-0.0047*	-0.0139*	0.0006	-0.0009	-0.0079*	0.0043*
	(0.0008)	(0.0016)	(0.0011)	(0.0012)	(0.0023)	(0.0016)	(0.0011)	(0.0021)	(0.0016)
Rural	0.0105*	0.0245*	0.0189*	0.0130*	0.0349*	0.0135*	0.0076	0.0114**	0.0249*
	(0.0024)	(0.0041)	(0.0029)	(0.0002)	(0.0061)	(0.0040)	(0.0031)**	(0.0053)	(0.0043)
Land Ownerships									
Privately Owned: Paddy	0.0125**	-0.0420**	0.0133	0.0152**	-0.0517***	0.0183	0.0081	-0.0386	0.0077
	(0,0052)	(0.0198)	(0.0103)	(0.0071)	(0.0287)	(0.0134)	(0.0081)	(0.0270)	(0.0165)
Privately Owned: Dryland	-0.0016	0.0086	-0.0150**	0.0019	0.0083	-0.0278**	-0.0059	0.0101	-0.0040
	(0.0040)	(0.0069)	(0.0071)	(0.0052)	(0.0103)	(0.0120)	(0.0066)	(0.0088)	(0.0085)
Privately Owned but managed by others (both paddy and dryland)	0.0054	-0.0675	-0.0142	0.0139	-0.0561	-0.0036	0.0035	-0.0673	-0.0220
	(0.0111)	(0.0499)	(0.0329)	(0.0180)	(0.0806)	(0.0522)	(0.0161)	(0.0601)	(0.0419)
Community Characteristics									
Dwelling Ownership	-0.0008*	-0.0014*	-0.0005***	-0.0004	-0.0001	-0.0005	-0.0013*	-0.0025*	-0.0005
	(0.0002)	(0.0004)	(0.0003)	(0.0003)	(0.0005)	(0.0004)	(0.0003)	(0.0005)	(0.0004)
Improved Drinking Water	0.0005*	-0.0003	-0.0015*	0.0008*	-0.0009*	-0.0015*	0.0003	0.0003	-0.0015*
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0003)	(0.0002)
Number of Schools	0.0062	0.0287***	-0.0129	0.0046	0.0408	-0.0171	0.0112	0.0445***	-0.0074
	(0.0092)	(0.0172)	(0.0129)	(0.0131)	(0.0249)	(0.0179)	(0.0129)	(0.0233)	(0.0188)
Student-teacher Ratios	0.0040	-0.0330***	0.0163	0.0048	-0.0427***	0.0216	0.0001	-0.0481**	0.0087
	(0.0091)	(0.0169)	(0.0127)	(0.0129)	(0.0244)	(0.0176)	(0.0129)	(0.0232)	(0.0184)
GRDP	-0.0002	-0.0003	-0.0006*	-0.0001	0.0002	-0.0010*	-0.0003***	-0.0009*	-0.0002
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0002)	(0.0003)	(0.0003)

Table 5A-7: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years and by Gender, SUSENAS 2005 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Telephone	-0.0053	0.0049	-0.0177*	-0.0089	-0.0054	-0.0156**	-0.0028	0.0081	-0.0199*
	(0.0037)	(0.0065)	(0.0051)	(0.0058)	(0.0100)	(0.0069)	(0.0045)	(0.0080)	(0.0074)
Computer	0.0053	0.0113	-0.0047	-0.0084	-0.0127	-0.0170	0.0111	0.0133	0.0082
	(0.0070)	(0.0126)	(0.0102)	(0.0136)	(0.0220)	(0.0156)	(0.0074)	(0.0136)	(0.0132)
Island									
Sumatera	0.0054	-0.0245***	0.0040	0.0159	0.0063	-0.0088	-0.0063	-0.0549*	0.0209
	(0.0073)	(0.0127)	(0.0102)	(0.0111)	(0.0188)	(0.0135)	(0.0092)	(0.0160)	(0.0158)
Java	-0.0114	0.0320**	0.0349*	-0.0088	0.0221	0.0152	-0.0143	0.0405**	0.0605*
	(0.0083)	(0.0142)	(0.0111)	(0.0126)	(0.0211)	(0.0148)	(0.0106)	(0.0181)	(0.0170)
Lesser Sunda Islands	0.0331***	0.0300**	0.0080	0.0196***	0.0370***	-0.0086	0.0062	0.0235	0.0287***
	(0.0076)	(0.0134)	(0.0108)	(0.0116)	(0.0200)	(0.0144)	(0.0097)	(0.0168)	(0.0167)
Kalimantan	0.0036	0.0183	0.0186***	0.0079	0.0415**	0.0011	0.0005	-0.0083	0.0400**
	(0.0071)	(0.0123)	(0.0100)	(0.0110)	(0.0184)	(0.0132)	(0.0089)	(0.0153)	(0.0154)
Sulawesi	0.0097	0.0239***	0.0307*	0.0205***	0.0752*	0.0103	-0.0042	-0.0437*	0.0576*
	(0.0072)	(0.0124)	(0.0099)	(0.0111)	(0.0185)	(0.0132)	(0.0091)	(0.0156)	(0.0154)
Maluku	-0.0162	-0.0624*	0.0251**	-0.0208	-0.0580**	0.0068	-0.0107	-0.0626*	0.0465**
	(0.0101)	(0.0162)	(0.0120)	(0.0155)	(0.00241)	(0.0164)	(0.0125)	(0.0200)	(0.0180)
Chi Squared	11588.92 (*d.f* 141)			7024.88 (*d.f* 138)			4667.88 (*d.f* 138)		
Pseudo R-Squared	0.1233			0.1260			0.1249		
Number of Observations	52,484			28,788			23,696		

Notes:

c. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

d. Standard errors are reported in brackets.

Table 5A-8: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 years by Region and Region-Gender, SUSENAS 2005.

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-0.0021	-0.0274*	-0.0116*	-0.0178*	-0.1089*	0.0023	-	-	-
	(0.0021)	(0.0044)	(0.0032)	(0.0024)	(0.0044)	(0.0031)			
Biological Child	-0.0212*	-0.1651*	-0.0250*	-0.0114**	-0.0919*	-0.0126***	-0.0139*	-0.1029*	-0.0180**
	(0.0030)	(0.0061)	(0.0053)	(0.0049)	(0.0087)	(0.0065)	(0.0048)	(0.0102)	(0.0083)
Household Head's Characteristics									
Age	-0.0003***	-0.0020*	0.0001	0.0005*	-0.0013*	-0.0008*	-0.00001	-0.0021*	0.0003
	(0.0001)	(0.0003)	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0004)	(0.0003)
Female Headed	-0.2792	0.1054	0.0789	-0.0123	0.1631	-0.0999	-0.0760	0.1211	0.0813
	(0.1907)	(0.2657)	(0.0182)	(0.0484)	(0.0333)	(0.2351)	(0.1891)	(0.2416)	(0.1134)
Household Head's Education									
Completed Primary	-0.0018	-0.0418*	-0.0078	-0.0110**	-0.0420*	-0.0096***	-0.0084	-0.0216	-0.0051
	(0.0063)	(0.0417)	(0.0074)	(0.0045)	(0.0076)	(0.0058)	(0.0076)	(0.0147)	(0.0106)
Junior Secondary	-0.0029	-0.1072*	-0.0261*	-0.0058	-0.1488*	-0.0370*	-0.0067	-0.0853*	-0.0271**
	(0.0068)	(0.0122)	(0.0084)	(0.0054)	(0.0102)	(0.0075)	(0.0083)	(0.0167)	(0.0122)
Senior Secondary	-0.0098	-0.1423*	-0.0461*	0.0071	-0.2173*	-0.0399*	-0.0126	-0.1310*	-0.0460*
	(0.0070)	(0.0130)	(0.0091)	(0.0060)	(0.0135)	(0.0091)	(0.0087)	(0.0181)	(0.0132)
Tertiary Education	-0.0069	0.1149*	-0.0394*	-0.0083	-0.2403*	-0.0814*	-0.0186	-0.2317*	-0.0266
	(0.0081)	(0.0157)	(0.0117)	(0.0118)	(0.0289)	(0.0195)	(0.0116)	(0.0343)	(0.0176)
Household Head's Employment									
Employer	0.0068**	0.0167**	-0.0072	0.0180*	0.0522*	-0.0110*	0.0107**	0.0278*	-0.0090
	(0.0031)	(0.0067)	(0.0049)	(0.0034)	(0.0057)	(0.0041)	(0.0043)	(0.0094)	(0.0073)
Employee	-0.0047	-0.0276*	-0.0064	0.0005	0.0025	0.0014	-0.0056	-0.0271*	-0.0075
	(0.0033)	(0.0066)	(0.0047)	(0.0057)	(0.0098)	(0.0065)	(0.0049)	(0.0097)	(0.0070)
Casual Worker	0.0058	0.0217**	0.0083	0.0061	0.0382*	0.0096	0.0092	0.0231***	0.0141***
	(0.0045)	(0.0086)	(0.0057)	(0.0061)	(0.0091)	(0.0059)	(0.0059)	(0.0118)	(0.0082)
Unpaid Worker	-0.0050	-0.0033	-0.0158	0.0237**	-0.0116	0.0187	0.0042	0.0338	-0.0330
	(0.0109)	(0.0309)	(0.052)	(0.0114)	(0.0255)	(0.0168)	(0.0128)	(0.0411)	(0.0399)
Others	-0.0024	0.0127	0.0046	0.0048	0.0553*	0.0154***	-0.009	0.0275**	0.0053
	(0.0053)	(0.0098)	(0.0066)	(0.0077)	(0.0124)	(0.0085)	(0.0076)	(0.0140)	(0.0098)

Table 5A-8: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 yearsby Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0007	-0.0254*	-0.0204*	-0.0036	-0.0454*	-0.0183*	0.0053	-0.0310**	-0.0208**
	(0.0053)	(0.0093)	(0.0062)	(0.0041)	(0.0067)	(0.0050)	(0.0071)	(0.0126)	(0.0090)
Junior Secondary	-0.0017	-0.0750*	-0.0411*	0.0071	-0.1560*	-0.0535*	0.0025	-0.0893*	-0.0511*
	(0.0060)	(0.0113)	(0.0078)	(0.0053)	(0.0107)	(0.0077)	(0.0081)	(0.0155)	(0.0116)
Senior Secondary	-0.0056	-0.1103*	-0.0467*	0.0083	-0.2310*	-0.0666*	-0.0033	-0.1404*	-0.0455*
	(0.0064)	(0.0127)	(0.0087)	(0.0067)	(0.0177)	(0.0114)	(0.0087)	(0.0182)	(0.0127)
Tertiary Education	-0.0034	-0.0635*	-0.0919*	-0.0184	-0.2374*	-0.0512**	0.0101	-0.2211*	-0.0947*
	(0.0079)	(0.0161)	(0.0154)	(0.0161)	(0.0356)	(0.0227)	(0.0116)	(0.0395)	(0.0255)
Spouse's Employment									
Employer	0.0319*	0.0237**	-0.0115	0.0294*	0.0337*	-0.0151***	0.0304*	-0.0040	-0.0154
	(0.0041)	(0.0111)	(0.0089)	(0.0051)	(0.0108)	(0.0088)	(0.0059)	(0.0171)	(0.0125)
Employee	-0.0032	0.0159***	-0.00001	-0.0241*	0.0561*	0.0084	-0.0025	0.0287**	-0.0152
	(0.0048)	(0.0096)	(0.0074)	(0.0088)	(0.0147)	(0.0110)	(0.0072)	(0.0145)	(0.0111)
Casual Worker	0.0088	0.0378**	0.0067	0.0060	0.0757*	0.0228**	-0.0028	0.0433**	-0.0111
	(0.0073)	(0.0151)	(0.0107)	(0.0079)	(0.0133)	(0.0097)	(0.0114)	(0.0210)	(0.0158)
Unpaid Worker	0.0145*	0.0181***	-0.0017	0.0197*	0.0388*	0.0028	0.0192*	0.0160	-0.0201
	(0.0045)	(0.0110)	(0.0082)	(0.0047)	(0.0090)	(0.0069)	(0.0062)	(0.0158)	(0.0127)
Others	-0.0102*	0.0093	0.0066	-0.0377*	-0.0004	0.0331*	-0.0061	0.0183***	-0.0046
	(0.0036)	(0.0071)	(0.0049)	(0.0048)	(0.0083)	(0.0061)	(0.0050)	(0.0099)	(0.0067)
Income (Rp.)									
Household Income	-0.0015	-0.0592*	-0.0025	0.0062	0.0223	0.0095	-0.0025	-0.0610*	0.0019
	(0.0046)	(0.0111)	(0.0082)	(0.0119)	(0.0171)	(0.0146)	(0.0080)	(0.0165)	(0.0113)
Square of HH Income	0.0006	0.0209*	-0.0024	-0.0070	0.0079	-0.0214**	0.0002	0.0191**	-0.0019
	(0.0018)	(0.0057)	(0.0042)	(0.0085)	(0.0091)	(0.0105)	(0.0041)	(0.0084)	(0.0053)
Household Characteristics									
Birth Order	0.0061	0.0789*	0.0193*	0.0019	0.0174*	0.0066	0.0027	0.0973*	0.0162
	(0.0047)	(0.0092)	(0.0069)	(0.0047)	(0.0096)	(0.0067)	(0.0068)	(0.0132)	(0.0100)
Child Aged 0-5 years	-0.0032	-0.0512*	-0.0148**	-0.0001	-0.1472*	-0.0046	0.0012	-0.0635*	-0.0118
	(0.0050)	(0.0098)	(0.0074)	(0.0051)	(0.0102)	(0.0072)	(0.0072)	(0.0141)	(0.0107)

Table 5A-8: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 yearsby Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0059	-0.0577*	-0.0132***	0.0025	-0.1584*	-0.0048	-0.0045	-0.0716*	-0.0086
	(0.0051)	(0.0098)	(0.0074)	(0.0051)	(0.0102)	(0.0072)	(0.0073)	(0.0143)	(0.0108)
Child Aged 10-14 years	-0.0044	-0.0693*	-0.0161**	0.0056	-0.1565*	-0.0029	-0.0008	-0.0833*	-0.0114
	(0.0049)	(0.0096)	(0.0073)	(0.0050)	(0.0100)	(0.0070)	(0.0071)	(0.0139)	(0.0105)
Child Aged 15-17 years	-0.0058	-0.0303*	-0.0129**	0.0061***	-0.0866*	0.0028	-0.0048	-0.0287*	-0.0091
	(0.0035)	(0.0071)	(0.0052)	(0.0034)	(0.0077)	(0.0049)	(0.0049)	(0.0104)	(0.0075)
Number of Adults	-0.0015	-0.0048**	0.0008	-0.0039*	-0.0154*	0.0033**	-0.0041*	-0.0064**	0.00002
	(0.0010)	(0.0021)	(0.0015)	(0.0012)	(0.0022)	(0.0016)	(0.0016)	(0.0030)	(0.0021)
Rural	-	-	-	-	-	-	-	-	-
Land Ownerships									
Privately Owned: Paddy	-0.0267	-0.0035	0.0271***	0.0189*	-0.0592**	0.0097	-0.0487	-0.0296	-0.0155
	(0.0186)	(0.0346)	(0.0145)	(0.0067)	(0.0257)	(0.0145)	(0.0609)	(0.0742)	(0.0528)
Privately Owned: Dryland	0.0131*	-0.0392	0.0064	-0.0073	0.0109	-0.0178**	0.0167***	-0.0323	0.0172
	(0.0050)	(0.0371)	(0.0165)	(0.0059)	(0.0082)	(0.0086)	(0.0089)	(0.0518)	(0.0283)
Privately Owned but managed by others (both paddy and dryland)	0.0137	0.0072	-0.0697	0.0057	-0.0855	-0.0006	0.0248	0.1334	-0.3645
	(0.0179)	(0.0794)	(0.0907)	(0.0153)	(0.0644)	(0.0393)	(0.0234)	(0.1460)	(0.3464)
Community Characteristics									
Dwelling Ownership	-0.0003	-0.0012*	0.0001	-0.0008*	-0.0002	-0.0012*	0.00004	-0.0012***	-0.0003
	(0.0002)	(0.0004)	(0.0003)	(0.0003)	(0.0006)	(0.0004)	(0.0003)	(0.0007)	(0.0005)
Improved Drinking Water	0.0003**	-0.0006**	-0.0016*	0.0007*	-0.0002	-0.0015*	0.0005**	-0.0008***	-0.0020*
	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0004)	(0.0003)
Number of Schools	-0.0104	-0.0159	-0.0173	0.0212	0.0610*	-0.0218	-0.0138	0.0065	-0.0490***
	(0.0129)	(0.0270)	(0.0200)	(0.0132)	(0.0233)	(0.0175)	(0.0176)	(0.0391)	(0.0296)
Student-teacher Ratios	0.0105	0.0185	0.0264	-0.0045	-0.0668*	0.0202	0.0113	0.0069	0.0610**
	(0.0128)	(0.0268)	(0.0198)	(0.0128)	(0.0227)	(0.0172)	(0.0174)	(0.0386)	(0.0294)
GRDP	-0.0002	-0.0003	0.0001	-0.0001	-0.0006***	-0.0009*	-0.0003	-0.0002	-0.0001
	(0.0001)	(0.0003)	(0.0003)	(0.0002)	(0.0003)	(0.0003)	(0.0002)	(0.0004)	(0.0004)
Telephone	-0.0043	-0.0011	-0.0137*	-0.0020	-0.0014	-0.0188***	-0.0074***	-0.0098	-0.0106
	(0.0029)	(0.0058)	(0.0046)	(0.0072)	(0.0129)	(0.0096)	(0.0045)	(0.0087)	(0.0066)

Table 5A-8: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 yearsby Region and Region-Gender, SUSENAS 2005 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Computer	0.0067	0.0073	0.0044	-0.0274	-0.0369	-0.0340	-0.0067	-0.0010	-0.0005
	(0.0047)	(0.0101)	(0.0081)	(0.0237)	(0.0340)	(0.0268)	(0.0092)	(0.0168)	(0.0125)
Island									
Sumatera	-0.0025	0.0503	0.0133	0.0067	-0.0434*	0.0018	-0.0195	0.0059	0.0057
	(0.0137)	(0.0318)	(0.0231)	(0.0096)	(0.0159)	(0.0128)	(0.0145)	(0.0400)	(0.0338)
Java	-0.0028	0.0835**	0.0093	-0.0262**	0.0085	0.0598*	-0.0256	-0.0093	-0.0080
	(0.0144)	(0.0328)	(0.0238)	(0.0118)	(0.0188)	(0.0144)	(0.0158)	(0.0417)	(0.0349)
Lesser Sunda Islands	0.0017	0.0577***	0.0136	0.0133	0.0181	0.0121	-0.0193	0.0124	0.0105
	(0.0144)	(0.0330)	(0.0239)	(0.0103)	(0.0171)	(0.0140)	(0.0157)	(0.0419)	(0.0349)
Kalimantan	-0.0054	0.0812**	0.0150	0.0035	-0.0006	0.0242***	-0.0422*	0.0382	0.0140
	(0.0139)	(0.0317)	(0.0231)	(0.0094)	(0.0154)	(0.0125)	(0.0161)	(0.0398)	(0.0338)
Sulawesi	0.0008	0.0685**	0.0446***	0.0085	0.0099	0.0311**	-0.0214	0.0362	0.0449
	(0.0136)	(0.0316)	(0.0228)	(0.0097)	(0.0158)	(0.0127)	(0.0144)	(0.0396)	(0.0334)
Maluku	-0.0109	-0.0019	0.0015	-0.0217	-0.0895*	0.0328**	-0.0619**	-0.0657	-0.0161
	(0.0163)	(0.0376)	(0.0285)	(0.0137)	(0.0205)	(0.0152)	(0.0267)	(0.0520)	(0.0459)
Chi Squared	3610.83 (*d.f* 138)			7065.16 (*d.f* 138)			2234.85 (*d.f* 135)		
Pseudo R-Squared	0.1351			0.1078			0.1512		
Number of Observations	19,582			32,902			101,401		

Notes:

c. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

d. Standard errors are reported in brackets.

Table 5A-9: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 years by Region-Gender, SUSENAS 2005.

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-	-	-	-	-	-	-	-	-
Biological Child	-0.0226*	-0.0186*	-0.0286*	-0.0053	-0.0667*	-0.0182**	-0.0176*	-0.1115*	-0.0077
	(0.0039)	(0.0075)	(0.0066)	(0.0075)	(0.0132)	(0.0085)	(0.0060)	(0.0103)	(0.0099)
Household Head's Characteristics									
Age	-0.0006*	-0.0016*	-0.0002	0.0007*	-0.0008***	-0.0005**	0.0003	-0.0019*	-0.0012*
	(0.0002)	(0.0004)	(0.0003)	(0.0002)	(0.0004)	(0.0003)	(0.0002)	(0.0004)	(0.0003)
Female Headed	-0.3097	0.1026	0.0955	-0.6873	0.1864	0.1117	-0.5548	0.1636	0.0856
	(0.4604)	(0.3135)	(0.1388)	(0.7256)	(0.1880)	(0.0571)	(0.8418)	(0.1765)	(0.2270)
Household Head's Education									
Completed Primary	0.0111	-0.0632*	-0.0114	-0.0122***	-0.0527*	-0.0016	-0.0086	-0.0298*	-0.0188**
	(0.0120)	(0.0151)	(0.0103)	(0.0063)-	(0.01100	(0.0078)	(0.0067)	(0.0102)	(0.0086)
Junior Secondary	0.0071	-0.1276*	-0.0261**	0.0044	-0.1760*	-0.0249**	-0.0068	-0.1142*	-0.0515*
	(0.0125)	(0.0174)	(0.0116)	(0.0076)	(0.0145)	(0.0100)	(0.0078)	(0.0138)	(0.0113)
Senior Secondary	-0.0004	-0.1474*	-0.0476*	0.0066	-0.2543*	-0.0201***	0.0084	-0.1696*	-0.0654*
	(0.0127)	(0.0180)	(0.0125)	(0.0084)	(0.0190)	(0.0120)	(0.0084)	(0.0187)	(0.0141)
Tertiary Education	0.0088	-0.1065*	-0.0407*	-0.0112	-0.3019*	-0.0813*	-0.0023	-0.1716*	-0.0802*
	(0.0135)	(0.0201)	(0.0155)	(0.0177)	(0.0441)	(00282)	(0.0148)	(0.0355)	(0.0272)
Household Head's Employment									
Employer	0.0016	0.023	0.0049	0.0233*	0.0685*	-0.0169*	0.0105**	0.0255*	-0.0012
	(0.0046)	(0.0092)	(0.0064)	(0.0048)	(0.0081)	(0.0054)	(0.0045)	(0.0077)	(0.0061)
Employee	-0.0044	-0.0243*	-0.0055	0.0050	0.0159	-0.0046	-0.0048	-0.0155	0.0094
	(0.0046)	(0.0087)	(0.0063)	(0.0083)	(0.0142)	(0.0087)	(0.0074)	(0.0127)	(0.0098)
Casual Worker	0.0017	0.0233***	0.0010	0.0089	0.0657*	0.0117	0.0026	0.0010	0.0078
	(0.0068)	(0.0119)	(0.0080)	(0.0088)	(0.0130)	(0.0078)	(0.0080)	(0.0122)	(0.0091)
Unpaid Worker	-0.0271	-0.0427	0.0002	0.0087	-0.0016	0.0326	0.0346*	-0.0297	-0.0020
	(0.0228)	(0.0459)	(0.0310)	(0.0191)	(0.0371)	(0.0204)	(0.0130)	(0.0336)	(0.0299)
Others	-0.0022	0.0002	0.0026	0.0019	0.0680*	0.0175	0.0087	0.0413**	0.0103
	(0.0075)	(0.0131)	(0.0090)	(0.0113)	(0.0177)	(0.0109)	(0.0098)	(0.0167)	(0.0138)

Table 5A-9: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 yearsby Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0072	-0.0172	-0.0212**	-0.0019	-0.0447*	-0.0152**	-0.0054	0.0454*	-0.0220*
	(0.0080)	(0.0135)	(0.0085)	(0.0057)	(0.0096)	(0.0067)	(0.0059)	(0.0089)	(0.0075)
Junior Secondary	-0.0065	-0.0508*	-0.0312*	0.0134***	-0.1753*	-0.0480*	-0.0004	-0.1295*	-0.0604*
	(0.0089)	(0.0163)	(0.0104)	(0.0074)	(0.0151)	(0.0103)	(0.0074)	(0.0145)	(0.0115)
Senior Secondary	-0.0079	-0.0682*	-0.0473*	0.0063	-0.2660*	-0.0455*	0.0086	-0.1774*	-0.0974*
	(0.0094)	(0.0176)	(0.0119)	(0.0099)	(0.0252)	(0.0145)	(0.0087)	(0.0236)	(0.0188)
Tertiary Education	-0.0099	-0.0171	-0.0768*	-0.0051	-0.3184*	-0.0399	-0.0291	-0.1643*	-0.0583***
	(0.0111)	(0.0203)	(0.0187)	(0.0243)	(0.0603)	(0.0306)	(0.0200)	(0.0394)	(0.0343)
Spouse's Employment									
Employer	0.0333*	0.0428*	-0.0044	0.0305*	0.0685*	-0.0174	0.0274*	0.0493*	-0.0106
	(0.0057)	(0.0140)	(0.0131)	(0.0075)	(0.0081)	(0.0113)	(0.0067)	(00135)	(0.0139)
Employee	-0.0053	0.0034	0.0184***	-0.0351**	0.0159	0.0100	-0.0135	0.0661*	0.0056
	(0.0065)	(0.0125)	(0.0102)	(0.0135)	(0.0142)	(0.0138)	(0.0107)	(00180)	(0.0187)
Casual Worker	0.0197**	0.0300	0.0299**	-0.0095	0.0657*	0.0152	0.0186***	0.0496*	0.0377**
	(0.0096)	(0.0210)	(0.0146)	(0.0124)	(0.0130)	(0.0127)	(0.0095)	(0.0170)	(0.0149)
Unpaid Worker	0.0096	0.0236	0.0184***	0.0223*	-0.0016	-0.0025	0.0160**	0.0303**	0.0116
	(0.0067)	(0.0147)	(0.0109)	(0.0067)	(0.0371)	(0.0089)	(0.0063)	(0.0117)	(0.0110)
Others	-0.0144*	0.0019	0.0218*	-0.0380*	0.0680	0.0237*	-0.0398*	-0.0197***	0.0479*
	(0.0051)	(0.0098)	(0.0075)	(0.0068)	(0.0177)	(0.0079)	(0.0069)	(0.0109)	(0.0098)
Income (Rp.)									
Household Income	0.0007	-0.0496*	-0.0034	-0.0003	0.0054	0.0256	0.0223	-0.0363***	-0.0043
	(0.0056)	(0.0141)	(0.0125)	(0.0157)	(0.0252)	(0.0186)	(0.0187)	(0.0216)	(0.0246)
Square of HH Income	0.0005	0.0149**	-0.0067	-0.0018	0.0132	-0.0223***	-0.0213	0.0080	-0.0286(6
	(0.0018)	(0.0071)	(0.0078)	(0.0098)	(0.0135)	(0.0124)	(0.0166)	(0.0117)	(0.0201)
Household Characteristics									
Birth Order	0.0094	0.0595*	0.0225**	-0.0033	0.2020*	-0.0010	0.0075	0.1351*	0.0172***
	(0.0066)	(0.0125)	(0.0096)	(0.0068)	(0.0137)	(0.0089)	(0.0063)	(0.0128)	(0.0102)
Child Aged 0-5 years	-0.0072	-0.0402*	-0.0177***	0.0046	-0.1688*	-0.0014	-0.0050	-0.1172*	-0.0100
	(0.0071)	(0.0133)	(0.0102)	(0.0074)	(0.0146)	(0.0096)	(0.0069)	(0.0136)	(0.0109)

Table 5A-9: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 yearsby Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0074	-0.0463*	-0.0176***	0.0081	-0.1875*	0.0004	-0.0041	-0.1187*	-0.0122
	(0.0070)	(0.0132)	(0.0102)	(0.0074)	(0.0147)	(0.0096)	(0.0068)	(0.0136)	(0.0109)
Child Aged 10-14 years	-0.0071	-0.0537*	-0.0211**	0.0105	-0.1852*	0.0058	0.00001	-0.1181*	-0.0148
	(0.0069)	(0.0132)	(0.0101)	(0.0072)	(0.0144)	(0.0093)	(0.0066)	(0.0133)	(0.0107)
Child Aged 15-17 years	-0.0062	-0.0283*	-0.0172**	0.0093***	-0.1032*	0.0094	0.0035	-0.0622*	-0.0062
	(0.0050)	(0.0093)	(0.0074)	(0.0049)	(0.0110)	(0.0065)	(0.0046)	(0.0102)	(0.0074)
Number of Adults	0.0011	-0.0039	0.0018	-0.0048*	-0.0180*	0.0010	-0.0024	-0.0112*	0.0062*
	(0.0014)	(0.0028)	(0.0019)	(0.0017)	(0.0031)	(0.0021)	(0.0016)	(0.0030)	(0.0023)
Rural	-	-	-	-	-	-	-	-	-
Land Ownerships									
Privately Owned: Paddy	-0.0091	0.0047	0.0334***	0.0226**	-0.0626***	-0.0256***	0.0166	-0.0572	-0.0400
	(0.0222)	(0.0388)	(0.0170)	(0.0090)	(0.0354)	(0.0154)	(0.0110)	(0.0386)	(0.0365)
Privately Owned: Dryland	0.0146**	-0.0520	-0.0034	-0.0016	0.0122	-0.0323**	-0.0186***	0.0111	-0.0033
	(0.0065)	(0.0536)	(0.0225)	(0.0074)	(0.0123)	(0.0139)	(0.0109)	(0.0104)	(0.0106)
Privately Owned but managed by others (both paddy and dryland)	-0.0755	-0.0826	-0.0054	0.0105	-0.0898	0.0160	0.0113	-0.0640	-0.0167
	(0.0125)	(0.1702)	(0.0510)	(0.0248)	(0.1048)	(0.0535)	(0.0201)	(0.0717)	(0.0590)
Community Characteristics									
Dwelling Ownership	-0.0007**	-0.0010	-0.0002	-0.0004	0.0011	-0.0011**	-0.0013*	-0.0021*	-0.0013**
	(0.0003)	(0.0006)	(0.0005)	(0.0004)	(0.0008)	(0.0005)	(0.0004)	(0.0008)	(0.0006)
Improved Drinking Water	0.0002	-0.0003	-0.0012*	0.0008*	-0.0010**	-0.0013*	0.0004	0.0007***	-0.001*
	(0.0002)	(0.0004)	(0.0003)	(0.0003)	(0.0005)	(0.0003)	(0.0003)	(0.0004)	(0.0003)
Number of Schools	-0.0028	0.0132	0.0143	0.0207	0.0545	-0.0085	0.0211	0.0733**	-0.0348
	(0.0190)	(0.0367)	(0.0270)	(0.0187)	(0.0335)	(0.0234)	(0.0182)	(0.0310)	(0.0265)
Student-teacher Ratios	0.0061	-0.0227	-0.0084	-0.0036	-0.0654**	0.0083	-0.0054	-0.0701**	0.0321
	(0.0189)	(0.0365)	(0.0266)	(0.0181)	(0.0325)	(0.0230)	(0.0180)	(0.0307)	(0.0260)
GRDP	-0.0003	-0.0002	0.0003	0.0001	0.0004	-0.0016*	-0.0003	-0.0018*	-0.0003
	(0.0002)	(0.0004)	(0.0003)	(0.0003)	(0.0005)	(0.0004)	(0.0003)	(0.0005)	(0.0004)
Telephone	-0.0016	0.0006	-0.0167*	0.0010	-0.0064	-0.0243***	-0.0067	0.0034	-0.0122
	(0.0039)	(0.0076)	(0.0063)	(0.0283)	(0.0185)	(0.0132)	(0.0104)	(0.0171)	(0.0141)

Table 5A-9: Multinomial Logit (Marginal Effects) of Child Activities of All Children Aged 15-17 yearsby Region-Gender, SUSENAS 2005 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Computer	0.0128**	0.0070	0.0089	0.0226**	-0.0371	-0.1588***	-0.0529	0.0772	0.0413
	(0.0057)	(0.0121)	(0.0104)	(0.0090)	(0.0590)	(0.0816)	(0.0448)	(0.2431)	(0.1101)
Island									
Sumatera	0.2799	0.0911	0.0050	0.0258***	0.0070	-0.0109	-0.0121	-0.00970*	0.0170
	(0.3941)	(0.2336)	(0.0106)	(0.0152)	(0.0236)	(0.0163)	(0.0118)	(0.0199)	(0.0209)
Java	0.2859	0.1733	0.0112	-0.0140	0.0355	0.0368**	-0.0347**	-0.0140	0.0865*
	(0.4321)	(0.1956)	(0.1541)	(0.0179)	(0.0276)	(0.0186)	(0.0153)	(0.0244)	(0.0231)
Lesser Sunda Islands	0.2883	0.1038	-0.0027	0.0291***	0.0418	-0.0136	-0.0009	-0.0037	0.0416***
	(0.3214)	(0.1125)	(0.0144)	(0.0160)	(0.0255)	(0.0180)	(0.0129)	(0.0215)	(0.0225)
Kalimantan	0.2930	0.1099	0.0001	0.0183	0.0424***	-0.0014	-0.0090	-0.0426**	0.0534*
	(0.2778)	(0.2107)	(0.0034)	(0.0150)	(0.0231)	(0.0160)	(0.0114)	(0.0190)	(0.0204)
Sulawesi	0.2765	0.0871	0.0280	0.0317**	0.0890*	-0.0005	-0.0173	-0.0858*	0.0691*
	(0.3245)	(0.1217)	(0.0291)	(0.0153)	(0.0235)	(0.0162)	(0.0122)	(0.0199)	(0.0205)
Maluku	0.2936	0.0495	-0.0020	-0.0100	-0.0671**	0.0047	-0.0302***	-0.1003*	0.0621*
	(0.3931)	(0.1235)	(0.0023)	(0.0207)	(0.0305)	(0.0200)	(0.0177)	(0.0254)	(0.0238)
Chi Squared	1875.18 (*d.f* 135)			3797.93 (*d.f* 135)			2838.96 (*d.f* 135)		
Pseudo R-Squared	0.1579			0.0958			0.1132		
Number of Observations	9,442			18,639			14,263		

Notes:

c. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

d. Standard errors are reported in brackets.

Table 5A-10: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years and by Gender, SUSENAS 2007.

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-0.0176*	-0.0117*	-0.0069*	-	-	-	-	-	-
	(0.0013)	(0.0009)	(0.0010)						
Biological Child	-0.0086*	-0.0054*	0.0029	-0.0087**	-0.0015	0.0005	-0.0008*	-0.0089*	0.0058**
	(0.0025)	(0.0015)	(0.0021)	(0.0037)	(0.0025)	(0.0029)	(0.0031)	(0.0016)	(0.0029)
Household Head's Characteristics									
Age	0.0002***	-0.00003	0.0001***	0.0002***	0.0001	0.00003	0.0001	-0.0002*	0.0002**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.0114	0.0030	-0.0265	-0.4564	0.0486	0.0038	0.0540	-0.1536	-0.3123
	(0.0226)	(0.0135)	(0.0274)	(0.5481)	(0.3465)	(0.0042)	(0.2934)	(0.2879)	(0.4203)
Household Head's Education									
Completed Primary	-0.0065**	-0.0095*	-0.0116*	-0.0086**	-0.0106*	-0.0145*	-0.0037	-0.0084*	-0.0085*
	(0.0026)	(0.0013)	(0.0018)	(0.0038)	(0.0020)	(0.0026)	(0.0036)	(0.0015)	(0.0025)
Junior Secondary	-0.0025	-0.0239*	-0.0246*	-0.0064	-0.0317*	-0.0283*	0.0023	-0.0150*	-0.0206*
	(0.0030)	(0.0020)	(0.0024)	(0.0044)	(0.0032)	(0.0034)	(0.0040)	(0.0023)	(0.0033)
Senior Secondary	-0.0060***	-0.0273*	-0.0283*	-0.0088***	-0.0338*	-0.0382*	-0.0023	-0.0196*	-0.0180*
	(0.0032)	(0.0024)	(0.0027)	(0.0047)	(0.0038)	(0.0040)	(0.0043)	(0.0029)	(0.0035)
Tertiary Education	-0.0069	-0.0267*	-0.0386*	-0.0094	-0.0464*	-0.0435*	-0.0030	-0.0163*	-0.0319*
	(0.0047)	(0.0049)	(0.0053)	(0.0073)	(0.0112)	(0.0078)	(0.0059)	(0.0046)	(0.0069)
Household Head's Employment									
Employer	0.0209*	0.0017	-0.0108*	0.0282*	0.0001	-0.0123*	0.0114*	0.0019	-0.0091*
	(0.0024)	(0.0015)	(0.0017)	(0.0036)	(0.0025)	(0.0025)	(0.0030)	(0.0018)	(0.0023)
Employee	0.0046***	0.0016	0.0033**	0.0055	0.0024	0.0035***	0.0030	0.0006	0.0030
	(0.0025)	(0.0016)	(0.0015)	(0.0038)	(0.0025)	(0.0021)	(0.0032)	(0.0019)	(0.0020)
Casual Worker	0.0141**	0.0126*	0.0037	0.0252*	0.0151*	0.0084	0.0005	0.0092**	-0.0020
	(0.0141)	(0.0032)	(0.0038)	(0.0089)	(0.0051)	(0.0053)	(0.0092)	(0.0037)	(0.0055)
Unpaid Worker	0.0261*	-0.0034	-0.0081***	0.0285*	-0.0037	-0.0170**	0.0212*	-0.0049	-0.0003
	(0.0048)	(0.0037)	(0.0047)	(0.0076)	(0.0057)	(0.0076)	(0.0058)	(0.0044)	(0.0057)
Others	0.0097**	-0.0011	0.0001	0.0156**	-0.0053	-0.0019	0.0031	0.0025	0.0021
	(0.0047)	(0.0029)	(0.0003)	(0.0071)	(0.0048)	(0.0044)	(0.0060)	(0.0032)	(0.0040)

Table 5A-10: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0101*	-0.0102*	-0.0050*	-0.0094*	-0.0135*	-0.0038	-0.0111*	-0.0063*	-0.0062*
	(0.0023)	(0.0012)	(0.0017)	(0.0033)	(0.0018)	(0.0024)	(0.0030)	(0.0014)	(0.0022)
Junior Secondary	-0.0077*	-0.0267*	-0.0185*	-0.0085**	-0.0314*	-0.0174*	-0.0070***	-0.0217*	-0.0197*
	(0.0028)	(0.0022)	(0.0024)	(0.0041)	(0.0032)	(0.0035)	(0.0036)	(0.0030)	(0.0033)
Senior Secondary	-0.0101*	-0.0323*	-0.0258*	-0.0076	-0.0428*	-0.0282*	-0.0124*	-0.0205*	-0.0231`*
	(0.0031)	(0.0031)	(0.0031)	(0.0047)	(0.0051)	(0.0046)	(0.0041)	(0.0034)	(0.0040)
Tertiary Education	-0.0147*	-0.0215*	-0.0232*	-0.0132	-0.0371*	-0.0304*	-0.0144**	-0.0145*	-0.0170**
	(0.0055)	(0.0054)	(0.0060)	(0.0087)	(0.0125)	(0.0098)	(0.0068)	(0.0050)	(0.0071)
Spouse's Employment									
Employer	0.0605*	0.0049**	-0.0108*	0.0567*	0.0011	-0.0112*	0.0611*	0.0081*	-0.0105*
	(0.0032)	(0.0023)	(0.0027)	(0.0049)	(0.0037)	(0.0038)	(0.0042)	(0.0027)	(0.0038)
Employee	-0.0010	0.0074*	0.0008	-0.0030	0.0047	-0.0003	0.0012	0.0087*	0.0022
	(0.0041)	(0.0026)	(0.0025)	(0.0062)	(0.0042)	(0.0037)	(0.0052)	(0.0029)	(0.0034)
Casual Worker	0.0261*	0.0073	-0.0057	0.0362*	0.0049	-0.0164***	0.0129	0.0062**	-0.0016
	(0.0082)	(0.0046)	(0.0060)	(0.0047)	(0.0032)	(0.0096)	(0.0122)	(0.0025)	(0.0030)
Unpaid Worker	0.0349*	0.0059*	-0.0050**	0.0347*	0.0078	-0.0079**	0.0335*	0.0062	0.0048
	(0.0032)	(0.0021)	(0.0022)	(0.0114)	(0.0073)	(0.0032)	(0.0042)	(0.0053)	(0.0074)
Others	-0.0319*	-0.0030	0.0004	-0.0295*	-0.0051	-0.0002	-0.0419*	-0.0018	0.0011
	(0.0034)	(0.0020)	(0.0019)	(0.0048)	(0.0032)	(0.0028)	(0.0049)	(0.0025)	(0.0027)
Income (Rp.)									
Household Income	-0.0011	-0.0059*	-0.0076*	-0.0028	-0.0121*	-0.0086*	0.00003	-0.0013	-0.0068*
	(0.0012)	(0.0011)	(0.0010)	(0.0022)	(0.0020)	(0.0019)	(0.0014)	(0.0010)	(0.0014)
Square of HH Income	0.0001***	0.0001*	0.0001**	0.0002	0.0004*	0.0002	0.00002	0.00003	0.0001**
	(0.00003)	(0.00002)	(0.0001)	(0.0001)	(0.0002)	(0.0003)	(0.00004)	(0.00002)	(0.0001)
Household Characteristics									
Birth Order	0.0296*	0.0326*	0.0253*	0.0361*	0.0435*	0.0260*	0.0216*	0.0206*	0.0247*
	(0.0017)	(0.0016)	(0.0015)	(0.0026)	(0.0025)	(0.0022)	(0.0022)	(0.0018)	(0.0021)
Child Aged 0-5 years	-0.0258*	-0.0294*	-0.0210*	-0.0311*	-0.0388*	-0.0210*	-0.0196*	-0.0193*	-0.0212*
	(0.0019)	(0.0017)	(0.0017)	(0.0029)	(0.0027)	(0.0024)	(0.0025)	(0.0019)	(0.0023)

Table 5A-10: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0238*	-0.0291*	-0.0211*	-0.0303*	-0.0393*	-0.0220*	-0.0161*	-0.0177*	-0.0201*
	(0.0020)	(0.0017)	(0.0017)	(0.0029)	(0.0027)	(0.0024)	(0.0025)	(0.0019)	(0.0024)
Child Aged 10-14 years	-0.0110*	-0.0177*	-0.0086*	-0.0126*	-0.0250*	-0.0076*	-0.0091*	-0.0096*	-0.0099*
	(0.0015)	(0.0014)	(0.0013)	(0.0022)	(0.0023)	(0.0019)	(0.0019)	(0.0016)	(0.0019)
Child Aged 15-17 years	-0.0020***	0.0004	0.0040*	-0.0021	-0.0004	0.0061*	-0.0016	0.0011	0.0014
	(0.0011)	(0.0007)	(0.0009)	(0.0017)	(0.0012)	(0.0013)	(0.0015)	(0.0008)	(0.0012)
Number of Adults	-0.0053*	-0.0005	0.0029*	-0.0065*	-0.0002	0.0037*	-0.0037*	-0.0007	0.0021*
	(0.0007)	(0.0005)	(0.0005)	(0.0011)	(0.0007)	(0.0008)	(0.0009)	(0.0005)	(0.0007)
Rural	0.0160*	0.0030**	-0.0003	0.0252*	0.0054**	-0.0017	0.0058**	0.0002	0.0012
	(0.0020)	(0.0013)	(0.0013)	(0.0031)	(0.0022)	(0.0019)	(0.0024)	(0.0015)	(0.0018)
Community Characteristics									
Dwelling Ownership	-0.0004**	-0.0001	-0.0003*	0.0001	-0.0001	-0.0002	-0.0009*	-0.0003**	-0.0004*
	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Improved Drinking Water	0.0003**	-0.0001	-0.00004	0.0001	-0.0001	-0.0001	0.0005**	0.0001	0.00003
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)
Improved Sanitation	0.0014*	0.0002**	-0.0001	0.0016*	0.0001	0.0001	0.0011*	0.0003*	-0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Source of Electricity	-0.0006*	-0.0002**	0.00002	-0.0007*	-0.0001	0.0001	-0.0006*	-0.0003*	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)
Number of Schools	0.0215**	0.0069	-0.0092	0.0391*	0.0175***	-0.0131	0.0063	-0.0055	-0.0040
	(0.0096)	(0.0065)	(0.0074)	(0.0143)	(0.0101)	(0.0105)	(0.0128)	(0.0083)	(0.0103)
Student-teacher Ratios	-0.0072	-0.0056	0.0074	-0.0223***	-0.0156***	0.0108	0.0063	0.0073	0.0028
	(0.0089)	(0.0061)	(0.0069)	(0.0133)	(0.0093)	(0.0099)	(0.0120)	(0.0079)	(0.0097)
GRDP	-0.0007*	-0.0001	-0.0002*	-0.0006*	0.0001	-0.0004*	-0.0009*	-0.0002*	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Telephone	-0.0088*	-0.0035	-0.0140*	-0.0218*	-0.0137**	-0.0159*	0.0021	0.0021	-0.0116*
	(0.0033)	(0.0030)	(0.0032)	(0.0056)	(0.0060)	(0.0049)	(0.0038)	(0.0028)	(0.0041)
Computer	0.0063	-0.0015	-0.0026	0.0108	-0.0215	-0.0065	0.0029	0.0027	0.0011
	(0.0046)	(0.0050)	(0.0049)	(0.0076)	(0.0137)	(0.0078)	(0.0053)	(0.0042)	(0.0059)
Island									
Sumatera	-0.0512*	-0.0118*	-0.0246*	-0.0055	-0.0028	-0.0211*	-0.0260*	-0.0213*	-0.0266*
	(0.0048)	(0.0027)	(0.0035)	(0.0072)	(0.0043)	(0.0054)	(0.0061)	(0.0033)	(0.0046)

Table 5A-10: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Java	-0.0663*	-0.0143*	-0.0074***	-0.0737*	-0.0145**	-0.0049	-0.0950*	-0.0138*	-0.0081
	(00063)	(0.0036)	(0.0045)	(0.0097)	(0.0060)	(0.0067)	(0.0079)	(0.0041)	(0.0059)
Lesser Sunda Islands	-0.0098**	-0.0051**	-0.0224*	-0.0087	0.0001	-0.0223*	-0.0104***	-0.0098*	-0.0202*
	(0.0047)	(0.0025)	(0.0036)	(0.0071)	(0.0042)	(0.0054)	(0.0060)	(0.0029)	(0.0046)
Kalimantan	-0.0177*	-0.0061**	-0.0150	-0.0169**	-0.0017	-0.0087***	-0.0183*	-0.0088*	-0.0203*
	(0.0051)	(0.0027)	(0.0034)	(0.0078)	(0.0045)	(0.0052)	(0.0063)	(0.0029)	(0.0044)
Sulawesi	0.0052	0.0009	-0.0084**	0.0175**	0.0135*	-0.0064	-0.0099***	-0.0123*	-0.0082***
	(0.0046)	(0.0025)	(0.0033)	(0.0071)	(0.0042)	(0.0051)	(0.0058)	(0.0029)	(0.0043)
Maluku	-0.0025	-0.0173*	-0.0366*	0.0004	-0.0143**	-0.0363*	-0.0043	-0.0172	-0.0353*
	(0.0053)	(0.0037)	(0.0048)	(0.0082)	(0.0060)	(0.0070)	(0.0066)	(0.0040)	(0.0066)
Chi Squared	12520.94 (*d.f* 138)			7715.77 (*d.f* 135)			4949.77 (*d.f* 135)		
Pseudo R-Squared	0.1455			0.1477			0.1486		
Number of Observations	103,673			55,137			48,536		

Notes:

e. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

f. Standard errors are reported in brackets.

Table 5A-11: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years by Region and Region-Gender, SUSENAS 2007.

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	0.0005	-0.0017***	-0.0064*	-0.0266*	-0.0167*	-0.0072*	-	-	-
	(0.0014)	(0.0009)	(0.0016)	(0.0018)	(0.0013)	(0.0013)			
Biological Child	-0.0099*	-0.0108*	-0.0020	-0.0068***	-0.0011	0.0058**	-0.0053	-0.0069*	-0.0034
	(0.0026)	(0.0013)	(0.0029)	(0.0035)	(0.0023)	(0.0028)	(0.0039)	(0.0021)	(0.0042)
Household Head's Characteristics									
Age	-0.0001	-0.0002*	0.00003	0.0003**	0.0001	0.0002***	-0.0001	-0.0001	-0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)
Female Headed	-0.2709	0.0158	-0.3043	0.0039	-0.0058	-0.0162	-0.2727	0.0200	-0.3484
	(0.2808)	(0.0165)	(0.4137)	(0.0295)	(0.0245)	(0.0309)	(0.2184)	(0.1600)	(0.3801)
Household Head's Education									
Completed Primary	-0.0125*	-0.0016	-0.0047	-0.0056	-0.0128*	-0.0139*	-0.0182*	-0.0001	-0.0042
	(0.0041)	(0.0018)	(0.0036)	(0.0035)	(0.0017)	(0.0022)	(0.0050)	(0.0025)	(0.0054)
Junior Secondary	-0.0085***	-0.0093*	-0.0141*	-0.0018	-0.0301*	-0.0287*	-0.0167*	-0.0083**	-0.0149**
	(0.0044)	(0.0024)	(0.0041)	(0.0040)	(0.0027)	(0.0031)	(0.0055)	(0.0034)	(0.0061)
Senior Secondary	-0.0143*	-0.0102*	-0.0195*	-0.0037	-0.0341*	-0.0301*	-0.0177*	-0.0089**	-0.0232*
	(0.0045)	(0.0025)	(0.0044)	(0.0043)	(0.0034)	(0.0035)	(0.0056)	(0.0037)	(0.0066)
Tertiary Education	-0.0115**	-0.0085**	-0.0204*	-0.0084	-0.0434*	-0.0574*	-0.0130***	-0.0183**	-0.0209**
	(0.0051)	(0.0035)	(0.0061)	(0.0071)	(0.0102)	(0.0099)	(0.0066)	(0.0093)	(0.0093)
Household Head's Employment									
Employer	0.0104*	0.0009	-0.0107*	0.0267*	-0.0001	-0.0123*	0.0111*	0.0010	-0.0108**
	(0.0025)	(0.0015)	(0.0028)	(0.0036)	(0.0023)	(0.0024)	(0.0034)	(0.0025)	(0.0041)
Employee	0.0008	-0.0002	0.0023	0.0077**	0.0028	0.0032	-0.0026	0.0015	0.0006
	(0.0022)	(0.0012)	(0.0019)	(0.0037)	(0.0024)	(0.0021)	(0.0031)	(0.0018)	(0.0028)
Casual Worker	0.0027	0.0049***	0.0025	0.0203**	0.0166*	0.0044	0.0072	0.0028	0.0060
	(0.0061)	(0.0026)	(0.0052)	(0.0091)	(0.0048)	(0.0051)	(0.0074)	(0.0046)	(0.0072)
Unpaid Worker	0.0070	0.0036	0.0009	0.0352*	-0.0090***	-0.0119**	0.0086	0.0065	-0.0005
	(0.0056)	(0.0036)	(0.0077)	(0.0068)	(0.0052)	(0.0060)	(0.0075)	(0.0047)	(0.0112)
Others	0.0024	-0.0006	0.0024	0.0160**	-0.0032	-0.0033	0.0027	0.0017	0.0031
	(0.0042)	(0.0023)	(0.0035)	(0.0070)	(0.0045)	(0.0045)	(0.0057)	(0.0033)	(0.0052)

Table 5A-11: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 yearsby Region and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0004	-0.0057*	-0.0053***	-0.0134*	-0.0126*	-0.0049**	0.0010	-0.0088*	-0.0050
	(0.0037)	(0.0015)	(0.0030)	(0.0030)	(0.0016)	(0.0021)	(0.0047)	(0.0020)	(0.0045)
Junior Secondary	0.0018	-0.0112*	-0.0144*	-0.0109*	-0.0346*	-0.0211*	-0.0044	-0.0125*	-0.0138**
	(0.0040)	(0.0022)	(0.0037)	(0.0038)	(0.0031)	(0.0032)	(0.0054)	(0.0029)	(0.0055)
Senior Secondary	-0.0019	-0.0149*	-0.0212*	-0.0122*	-0.0399*	-0.0284*	-0.0060	-0.0199*	-0.0275*
	(0.0042)	(0.0027)	(0.0042)	(0.0044)	(0.0046)	(0.0044)	(0.0056)	(0.0043)	(0.0065)
Tertiary Education	-0.0008	-0.0089*	-0.0184*	-0.0226**	-0.0467*	-0.0281*	-0.0045	-0.0119***	-0.0195***
	(0.0052)	(0.0034)	(0.0066)	(0.0092)	(0.0142)	(0.0105)	(0.0070)	(0.0069)	(0.0101)
Spouse's Employment									
Employer	0.0350*	0.0077*	-0.0121*	0.0702*	0.0009	-0.0085**	0.0288*	0.0083**	-0.0095***
	(0.0028)	(0.0021)	(0.0039)	(0.0049)	(0.0034)	(0.0037)	(0.0039)	(0.0033)	(0.0053)
Employee	-0.0038	0.0057*	-0.0034	0.0040	0.0066***	0.0051	-0.0023	0.0057***	-0.0082***
	(0.0033)	(0.0021)	(0.0030)	(0.0062)	(0.0039)	(0.0037)	(0.0045)	(0.0033)	(0.0046)
Casual Worker	-0.0106	0.0052**	-0.0020	0.0420*	0.0056	-0.0067	0.0134*	0.0098***	-0.0103
	(0.0132)	(0.0022)	(0.0079)	(0.0112)	(0.0068)	(0.0083)	(0.0041)	(0.0058)	(0.0127)
Unpaid Worker	0.0166*	0.0067***	-0.0027	0.0432*	0.0033	-0.0031	-0.0031	0.0071**	-0.0048
	(0.0030)	(0.0039)	(0.0035)	(0.0047)	(0.0030)	(0.0031)	(0.0138)	(0.0033)	(0.0051)
Others	-0.0221*	0.0024	-0.0046**	-0.0355*	-0.0083*	0.0046	-0.0183*	0.0028	-0.0064***
	(0.0031)	(0.0018)	(0.0023)	(0.0050)	(0.0030)	(0.0028)	(0.0040)	(0.0027)	(0.0034)
Income (Rp.)									
Household Income	-0.0001	-0.0005	-0.0054*	-0.0013	-0.0125*	-0.0093*	-0.0018	-0.0027	-0.0058*
	(0.0008)	(0.0006)	(0.0012)	(0.0026)	(0.0021)	(0.0025)	(0.0015)	(0.0024)	(0.0021)
Square of HH Income	0.00002	0.00002	0.0001***	0.00003	0.0006**	0.0001	0.0001	0.0001	0.0002
	(0.00002)	(0.00001)	(0.0001)	(0.0003)	(0.0003)	(0.0006)	(0.0001)	(0.0006)	(0.0002)
Household Characteristics									
Birth Order	0.0146*	0.0188*	0.0209*	0.0371*	0.0407*	0.0273*	0.0141*	0.0182*	0.0220*
	(0.0021)	(0.0027)	(0.0024)	(0.0023)	(0.0021)	(0.0019)	(0.0029)	(0.0034)	(0.0034)
Child Aged 0-5 years	-0.0139*	-0.0182*	-0.0170*	-0.0319*	-0.0364*	-0.0229*	-0.0123*	-0.0173*	-0.0181*
	(0.0024)	(0.0028)	(0.0026)	(0.0026)	(0.0022)	(0.0021)	(0.0032)	(0.0035)	(0.0038)

Table 5A-11: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 yearsby Region and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0098*	-0.0172*	-0.0171*	-0.0310*	-0.0364*	-0.0229*	-0.0085*	-0.0167*	-0.0178*
	(0.0024)	(0.0028)	(0.0027)	(0.0027)	(0.0023)	(0.0022)	(0.0032)	(0.0035)	(0.0039)
Child Aged 10-14 years	-0.0063*	-0.0125*	-0.0061*	-0.0137*	-0.0214*	-0.0098*	-0.0048***	-0.0112*	-0.0053***
	(0.0018)	(0.0025)	(0.0021)	(0.0020)	(0.0019)	(0.0017)	(0.0024)	(0.0031)	(0.0030)
Child Aged 15-17 years	-0.0025**	0.0013***	0.0020	-0.0022	-0.0001	0.0050*	-0.0016	0.0010	0.0039**
	(0.0013)	(0.0008)	(0.0013)	(0.0016)	(0.0010)	(0.0011)	(0.0017)	(0.0011)	(0.0019)
Number of Adults	-0.0018**	-0.0006	0.0026*	-0.0071*	-0.0003	0.0030*	-0.0007	-0.0004	0.0040*
	(0.0008)	(0.0005)	(0.0007)	(0.0010)	(0.0006)	(0.0007)	(0.0010)	(0.0007)	(0.0011)
Rural	-	-	-	-	-	-	-	-	-
Community Characteristics									
Dwelling Ownership	-0.0002	0.0001	0.0001	-0.0004***	-0.0002	-0.0005*	-0.0005**	0.0002	0.0002
	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Improved Drinking Water	-0.0003***	-0.0002	0.0001	0.0006*	-0.00002	-0.0001	-0.0002	-0.0001	-0.0001
	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0002)
Improved Sanitation	0.0005*	0.0001	-0.0001	0.0019*	0.0003**	-0.0001	0.0003***	0.0001	0.0001
	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0003)
Source of Electricity	-0.0001	-00001	0.00002	-0.0009*	-0.0002**	-0.00002	-0.0001	-0.0001	-0.00003
	(0.0001)	(0.0001)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0002)
Number of Schools	0.0154	0.0095	-0.0168	0.0266***	0.0052	-0.0075	0.0107	0.0139	-0.0088
	(0.0105)	(0.0067)	(0.0115)	(0.0137)	(0.0094)	(0.0096)	(0.0144)	(0.0100)	(0.0168)
Student-teacher Ratios	-0.0126	-0.0087	0.0137	-0.0060	-0.0039	0.0062	-0.0083	-0.0127	0.0075
	(0.0099)	(0.0063)	(0.0108)	(0.0127)	(0.0087)	(0.0090)	(0.0135)	(0.0092)	(0.0158)
GRDP	-0.0003*	0.00003	-0.0001	-0.0010*	-0.0001	-0.0003*	-0.0005*	0.0002***	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)
Telephone	-0.0050**	-0.0024	-0.0098*	-0.0103***	-0.0059	-0.0226*	-0.0098*	-0.0077**	-0.0125*
	(0.0021)	(0.0017)	(0.0030)	(0.0061)	(0.0059)	(0.0068)	(0.0032)	(0.0035)	(0.0046)
Computer	0.0030	0.0004	-0.0024	0.0080	-0.0199	-0.0051	0.0077***	-0.0079	-0.0047
	(0.0028)	(0.0025)	(0.0045)	(0.0088)	(0.0138)	(0.0099)	(0.0041)	(0.0083)	(0.0073)
Island									
Sumatera	-0.0086	0.0097	-0.0127***	-0.0220*	-0.0171*	-0.0284*	-0.0123	0.0181	-0.0182
	(0.0068)	(0.0076)	(0.0070)	(0.0065)	(0.0037)	(0.0045)	(0.2880)	(0.0235)	(0.0378)

Table 5A-11: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 yearsby Region and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Java	-0.0258*	0.0075	-0.0026	-0.0929*	-0.0204*	-0.0049	-0.0286	0.0243	-0.0145
	(0.0078)	(0.0080)	(0.0081)	(0.0095)	(0.0054)	(0.0061)	(0.1254)	(0.0281)	(0.0153)
Lesser Sunda Islands	-0.0033	0.0116	-0.0144***	-0.0177*	-0.0080**	-0.0246*	-0.0158	0.0104	-0.0206
	(0.0071)	(0.0078)	(0.0076)	(0.0064)	(0.0035)	(0.0045)	(0.0296)	(0.0112)	(0.0221)
Kalimantan	-0.0031	0.0129***	-0.0046	-0.0286*	-0.0101*	-0.0176*	-0.0082	0.0172	-0.0070
	(0.0068)	(0.0076)	(0.0068)	(0.0072)	(0.0039)	(0.0044)	(0.0096)	(0.0223)	(0.0071)
Sulawesi	-0.0058	0.0146***	0.0044	0.0045	-0.0011	-0.0113**	-0.0092	0.0227	-0.0023
	(0.0066)	(0.0076)	(0.0067)	(0.0066)	(0.0036)	(0.0044)	(0.0101)	(0.0280)	(0.0101)
Maluku	0.0147	-0.0956	-0.0104	-0.0126***	-0.0229*	-0.0426*	0.0138	-0.0018	-0.0169
	(0.1873)	(0.2465)	(0.2518)	(0.0076)	(0.0049)	(0.0061)	(0.0231)	(0.0487)	(0.0211)
Chi Squared	2638.81 (*d.f* 135)			8736.76 (*d.f* 135)			1507.66 (*d.f* 132)		
Pseudo R-Squared	0.1556			0.1295			0.1590		
Number of Observations	34,388			69,285			17,999		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5A-12: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 years by Region-Gender, SUSENAS 2007.

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-	-	-	-	-	-	-	-	-
Biological Child	-0.0140*	-0.0139*	-0.0005	-0.0094***	0.0020	0.0027	-0.0036	-0.0044***	0.0098**
	(0.0035)	(0.0019)	(0.0040)	(0.0052)	(0.0037)	(0.0039)	(0.0044)	(0.0025)	(0.0039)
Household Head's Characteristics									
Age	-0.0001	-0.0002*	0.0003**	0.0004**	0.0002***	0.0001	0.0001	-0.0001	0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Female Headed	-0.2754	-0.0909	-0.2651	-0.0286	0.0524	0.0254	0.0135	-0.0165	-0.0307
	(0.2116)	(0.0263)	(0.3116)	(0.0332)	(0.0584)	(0.2968)	(0.0177)	(0.0177)	(0.0315)
Household Head's Education									
Completed Primary	0.0012	-0.0044***	-0.0052	-0.0067	-0.0153*	-0.0179*	-0.0044	-0.0100*	-0.0099*
	(0.0078)	(0.0025)	(0.0040)	(0.0051)	(0.0027)	(0.0032)	(0.0046)	(0.0020)	(0.0031)
Junior Secondary	0.0069	-0.0121*	-0.0150*	-0.0041	-0.0425*	-0.0330*	0.0011	-0.0158*	-0.0424*
	(0.0080)	(0.0035)	(0.0050)	(0.0060)	(0.0044)	(0.0044)	(0.0053)	(0.0030)	(0.0043)
Senior Secondary	-0.0035	-0.0128*	-0.0145*	-0.0069	-0.0453*	-0.0429*	0.0004	-0.0212*	-0.0173*
	(0.0081)	(0.0036)	(0.0053)	(0.0064)	(0.0054)	(0.0054)	(0.0056)	(0.0040)	(0.0046)
Tertiary Education	-0.0040	-0.0097**	-0.0165***	-0.0153	-0.0566*	-0.0640*	-0.0010	-0.0269**	-0.0475*
	(0.0088)	(0.0042)	(0.0084)	(0.0111)	(0.0161)	(0.0147)	(0.0087)	(0.0114)	(0.0130)
Household Head's Employment									
Employer	0.0097*	-0.0006	-0.0106*	0.0375*	-0.0009	-0.0121*	0.0155*	0.0011	-0.0102*
	(0.0036)	(0.0020)	(0.0039)	(0.0053)	(0.0036)	(0.0036)	(0.0048)	(0.0030)	(0.0031)
Employee	0.0038	-0.0018	0.0044***	0.0132**	0.0025	0.0047	0.0008	0.0031	0.0015
	(0.0032)	(0.0016)	(0.0025)	(0.0055)	(0.0037)	(0.0029)	(0.0047)	(0.0029)	(0.0029)
Casual Worker	-0.0031	0.0045	-0.0018	0.0349*	0.0230*	0.0100	0.0015	0.0098***	-0.0019
	(0.0112)	(0.0031)	(0.0077)	(0.0131)	(0.0073)	(0.0071)	(0.0127)	(0.0058)	(0.0074)
Unpaid Worker	0.0068	-0.0025	0.0052	0.0337*	-0.0097	-0.0225**	0.0306*	-0.0078	-0.0014
	(0.0084)	(0.0066)	(0.0106)	(0.0108)	(0.0083)	(0.0101)	(0.0081)	(0.0061)	(0.0071)
Others	0.0028	-0.0036	0.0015	0.0244**	-0.0108	-0.0055	0.0083	0.0051	0.0005
	(0.0063)	(0.0033)	(0.0047)	(0.0106)	(0.0074)	(0.0066)	(0.0090)	(0.0049)	(0.0060)

Table 5A-12: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 yearsby Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0003	-0.0007	-0.0052	-0.0127*	-0.0161*	-0.0034	-0.0141*	-0.0082*	-0.0066**
	(0.0057)	(0.0024)	(0.0040)	(0.0045)	(0.0025)	(0.0030)	(0.0039)	(0.0019)	(0.0028)
Junior Secondary	0.0075	-0.0086**	-0.0150*	-0.0097***	-0.0417*	-0.0203*	-0.0124**	-0.0270*	-0.0218*
	(0.0062)	(0.0036)	(0.0050)	(0.0056)	(0.0047)	(0.0046)	(0.0048)	(0.0041)	(0.0044)
Senior Secondary	0.0022	-0.0069***	-0.0145*	-0.0075	-0.0530*	-0.0265*	-0.0174*	-0.0250*	-0.0300*
	(0.0064)	(0.0036)	(0.0053)	(0.0065)	(0.0073)	(0.0063)	(0.0056)	(0.0053)	(0.0060)
Tertiary Education	0.0037	-0.0032	-0.0165***	-0.0258***	-0.0555**	-0.0603**	-0.0189***	-0.0367**	-0.0133
	(0.0077)	(0.0042)	(0.0084)	(0.0147)	(0.0226)	(0.0246)	(0.0107)	(0.0162)	(0.0108)
Spouse's Employment									
Employer	0.0401*	0.0062**	-0.0179*	0.0669*	-0.0044	-0.0091***	0.0708*	0.0068***	-0.0074
	(0.0040)	(0.0027)	(0.0065)	(0.0073)	(0.0053)	(0.0053)	(0.0064)	(0.0040)	(0.0051)
Employee	-0.0058	0.0047***	0.0018	-0.0015	0.0027	0.0072	0.0109	0.0102**	0.0024
	(0.0048)	(0.0025)	(0.0039)	(0.0093)	(0.0062)	(0.0052)	(0.0079)	(0.0044)	(0.0051)
Casual Worker	-0.2711	0.0099	0.0093	0.0521*	0.0046	-0.0185	0.0409*	0.0065	0.0042
	(0.3098)	(0.4620)	(0.0149)	(0.0160)	(0.0107)	(0.0131)	(0.0063)	(0.0077)	(0.0102)
Unpaid Worker	0.0193*	0.0017	-0.0002	0.0465*	0.0022	-0.0049	0.0295***	0.0049	-0.0007
	(0.0044)	(0.0030)	(0.0048)	(0.0069)	(0.0046)	(0.0044)	(0.0158)	(0.0037)	(0.0042)
Others	-0.0288*	0.0012	-0.0025	-0.0346*	-0.0109**	0.0057	-0.0448*	-0.0055	0.0037
	(0.0050)	(0.0022)	(0.0031)	(0.0072)	(0.0046)	(0.0041)	(0.0073)	(0.0038)	(0.0039)
Income (Rp.)									
Household Income	0.0012	0.0004	-0.0054*	-0.0033	-0.0178*	-0.0046	0.0053	-0.0057	-0.0087*
	(0.0011)	(0.0006)	(0.0016)	(0.0037)	(0.0032)	(0.0050)	(0.0048)	(0.0039)	(0.0024)
Square of HH Income	-0.0001	-0.0001	0.0001	0.0005	0.0010*	-0.0046	-0.0015	0.0001	0.0005***
	(0.0002)	(0.0002)	(0.0001)	(0.0004)	(0.0004)	(0.0050)	(0.0011)	(0.0012)	(0.0003)
Household Characteristics									
Birth Order	0.0148*	0.0213*	0.0202*	0.0468*	0.0561*	0.0276*	0.0250*	0.0239*	0.0270*
	(0.0031)	(0.0051)	(0.0033)	(0.0036)	(0.0035)	(0.0027)	(0.0030)	(0.0023)	(0.0028)
Child Aged 0-5 years	-0.0156*	-0.0207*	-0.0164*	-0.0399*	-0.0496*	-0.0222*	-0.0219*	-0.0223*	-0.0237*
	(0.0036)	(0.0052)	(0.0036)	(0.0040)	(0.0036)	(0.0030)	(0.0033)	(0.0024)	(0.0030)

Table 5A-12: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 yearsby Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0106*	-0.0193*	-0.0167*	-0.0409*	-0.0507*	-0.0238*	-0.0190*	-0.0207*	-0.0219*
	(0.0035)	(0.0052)	(0.0037)	(0.0040)	(0.0037)	(0.0031)	(0.0034)	(0.0024)	(0.0031)
Child Aged 10-14 years	-0.0082*	-0.0157*	-0.0072**	-0.0166*	-0.0321*	-0.0085*	-0.0101*	-0.0098*	-0.0113*
	(0.0027)	(0.0049)	(0.0029)	(0.0030)	(0.0032)	(0.0024)	(0.0025)	(0.0020)	(0.0024)
Child Aged 15-17 years	-0.0038**	0.0014	-0.0004	-0.0031	-0.0012	0.0072*	-0.0009	0.0008	0.0023
	(0.0019)	(0.0010)	(0.0018)	(0.0024)	(0.0016)	(0.0016)	(0.0020)	(0.0012)	(0.0016)
Number of Adults	-0.0033*	-0.0003	0.0011	-0.0096*	-0.0002	0.0031*	-0.0043*	-0.0005	0.0028*
	(0.0011)	(0.0006)	(0.0010)	(0.0015)	(0.0010)	(0.0010)	(0.0013)	(0.0007)	(0.0009)
Rural	-	-	-	-	-	-	-	-	-
Community Characteristics									
Dwelling Ownership	0.0001	-0.0002	-0.0002	0.0005	-0.0002	-0.0004**	-0.0014*	-0.0003	-0.0007*
	(0.0002)	(0.0001)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)
Improved Drinking Water	-0.0004***	-0.0002	0.0003***	0.0002	-0.0001	-0.0001	0.0009*	0.0001	-0.0001
	(0.0002)	(0.0001)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Improved Sanitation	0.0007*	0.0001	-0.0004***	0.0023*	0.0002	0.0001	0.0013*	0.0004*	-0.0002
	(0.0002)	(0.0001)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Source of Electricity	-0.0002	0.0001	0.0001	-0.0010*	-0.0001	-0.0001	-0.0009*	-0.0004*	0.0001
	(0.0002)	(0.0001)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0001)	(0.0002)
Number of Schools	0.0206	0.0073	-0.0245	0.0566*	0.0168	-0.0160	-0.0045	-0.0118	0.0044
	(0.0153)	(0.0093)	(0.0158)	(0.0204)	(0.0142)	(0.0135)	(0.0181)	(0.0120)	(0.0136)
Student-teacher Ratios	-0.0171	-0.0061	0.0194	-0.0322***	-0.0150	0.0132	0.0218	0.0134	-0.0037
	(0.0144)	(0.0088)	(0.0148)	(0.0188)	(0.0132)	(0.0127)	(0.0170)	(0.0114)	(0.0128)
GRDP	-0.0002	-0.0001	-0.0001	-0.0007*	0.00001	-0.0006*	-0.0013*	-0.0003*	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)
Telephone	-0.0009	0.0004	-0.0074***	-0.0264*	-0.0127	-0.0268**	0.0052	0.0011	-0.0182**
	(0.0028)	(0.0019)	(0.0038)	(0.0101)	(0.0100)	(0.0104)	(0.0070)	(0.0060)	(0.0087)
Computer	0.0005	0.0012	0.0002	0.0027	0.0271	-0.0169	0.0098	-0.0117	0.0035
	(0.0039)	(0.0026)	(0.0055)	(0.0144)	(0.0219)	(0.0171)	(0.0100)	(0.0154)	(0.0113)
Island									
Sumatera	-0.0099	-0.0025	-0.0131	-0.0099	-0.0079	-0.0237*	-0.0352*	-0.0263*	-0.0317*
	(0.0099)	(0.0072)	(0.0089)	(0.0100)	(0.0060)	(0.0067)	(0.0083)	(0.0046)	(0.0060)

Table 5A-12: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 10-14 yearsby Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Java	-0.0301*	0.0002	0.0041	-0.1075*	-0.0204**	0.0007	-0.0733*	-0.0173*	-0.0093
	(0.0111)	(0.0080)	(0.0104)	(0.0143)	(0.0086)	(0.0089)	(0.0122)	(0.0063)	(0.0083)
Lesser Sunda Islands	0.0030	0.0080	-0.0148	-0.0138	0.0001	-0.0249*	-0.0194**	-0.0146*	-0.0211*
	(0.0101)	(0.0074)	(0.0097)	(0.0097)	(0.0057)	(0.0068)	(0.0082)	(0.0041)	(0.0059)
Kalimantan	-0.0030	0.0050	-0.0085	-0.0287*	-0.0051	-0.0104	-0.0258*	-0.0123*	-0.0241*
	(0.0099)	(0.0069)	(0.0086)	(0.0110)	(0.0063)	(0.0066)	(0.0091)	(0.0043)	(0.0059)
Sulawesi	-0.0085	0.0015	0.0043	0.0193***	0.0144**	-0.0090	-0.0113	-0.0159*	-0.0111***
	(0.0096)	(0.0071)	(0.0084)	(0.0100)	(0.0059)	(0.0066)	(0.0085)	(0.0043)	(0.0058)
Maluku	0.0108	-0.0118	-0.0109	-0.0127	-0.0202**	-0.0415*	-0.0098	-0.0212*	-0.0413*
	(0.3603)	(0.0206)	(0.0364)	(0.0117)	(0.0081)	(0.0088)	(0.0093)	(0.0055)	(0.0085)
Chi Squared	1365.98 (*d.f* 132)			5210.45 (*d.f* 132)			3477.87 (*d.f* 132)		
Pseudo R-Squared	0.1832			0.1256			0.1365		
Number of Observations	16,389			37,139			32,146		

Notes:

a. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

b. Standard errors are reported in brackets.

Table 5A-13: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years and by Gender, SUSENAS 2007.

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-0.0213*	-0.0717*	-0.0110*	-	-	-	-	-	-
	(0.0025)	(0.0032)	(0.0025)						
Biological Child	-0.0650*	-0.0922*	0.0088***	-0.0366*	-0.0628*	0.0063	-0.0777*	-0.1040*	0.0124***
	(0.0035)	(0.0050)	(0.0048)	(0.0056)	(0.0078)	(0.0066)	(0.0044)	(0.0058)	(0.0070)
Household Head's Characteristics									
Age	-0.0004*	-0.0001*	-0.0001	-0.0002	-0.0005***	0.0001	-0.0006*	-0.0015*	-0.0005**
	(0.0001)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Female Headed	0.0243	-0.1439	0.0814**	0.0757	-0.1202	0.0623	-0.0379	-0.1639	0.3004
	(0.0494)	(0.0914)	(0.0376)	(0.0569)	(0.1102)	(0.0520)	(0.0381)	(0.3508)	(0.5094)
Household Head's Education									
Completed Primary	-0.0136**	-0.0287*	-0.0117**	-0.0161**	-0.0258*	-0.0108	-0.0074	-0.0342*	-0.0140***
	(0.0053)	(0.0058)	(0.0051)	(0.0070)	(0.0082)	(0.0071)	(0.0083)	(0.0077)	(0.0074)
Junior Secondary	-0.0052	-0.1009*	-0.0339*	-0.0018	-0.1079*	-0.0304*	-0.0054	-0.0886*	-0.0401*
	(0.0061)	(0.0073)	(0.0062)	(0.0081)	(0.0102)	(0.0086)	(0.0093)	(0.0098)	(0.0090)
Senior Secondary	-0.0051	-0.1534*	-0.0358*	-0.0013	-0.1781*	-0.0349*	-0.0030	-0.1178*	-0.0392*
	(0.0064)	(0.0084)	(0.0067)	(0.0086)	(0.0121)	(0.0093)	(0.0095)	(0.0108)	(0.0095)
Tertiary Education	0.0136	-0.1629*	-0.0520*	0.0206	-0.2846*	-0.0333**	0.0152	-0.1021*	-0.0588*
	(0.0083)	(0.0145)	(0.0110)	(0.0131)	(0.0301)	(0.0156)	(0.0112)	(0.0158)	(0.0155)
Household Head's Employment									
Employer	0.0388*	0.0140*	-0.0344*	0.0482*	0.0195*	-0.0428*	0.0213*	-0.0035	-0.0208*
	(0.0042)	(0.0051)	(0.0040)	(0.0059)	(0.0074)	(0.0055)	(0.0058)	(0.0068)	(0.0059)
Employee	-0.0113**	0.0169*	0.0037	-0.0059	0.0305*	0.0016	-0.0160*	-0.0005	0.0060
	(0.0044)	(0.0050)	(0.0035)	(0.0063)	(0.0073)	(0.0048)	(0.0060)	(0.0066)	(0.0050)
Casual Worker	0.0302*	-0.0058	0.0150***	0.0282***	-0.0026	0.0193	0.0318**	-0.0108	0.0087
	(0.0112)	(0.0140)	(0.0090)	(0.0161)	(0.0199)	(0.0120)	(0.0152)	(0.0186)	(0.0137)
Unpaid Worker	0.0277**	0.0098	-0.0335**	0.0366**	0.0175	-0.0514*	0.0116	-0.0062	-0.0099
	(0.0107)	(0.0142)	(0.0131)	(0.0149)	(0.0204)	(0.0192)	(0.0149)	(0.0183)	(0.0173)
Others	0.0160**	0.0157*	0.0041	0.0188***	0.0208	0.0094	0.0118	0.0257**	-0.0017
	(0.0077)	(0.0090)	(0.0065)	(0.0113)	(0.0134)	(0.0087)	(0.0101)	(0.0110)	(0.0097)

Table 5A-13: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0039	-0.0470*	-0.0142*	-0.0017	-0.0515*	-0.0073	-0.0060	-0.0388*	-0.0241*
	(0.0046)	(0.0049)	(0.0043)	(0.0061)	(0.0069)	(0.0059)	(0.0070)	(0.0066)	(0.0062)
Junior Secondary	0.0008	-0.1197*	-0.0430*	0.0054	-0.1257*	-0.0349*	-0.0020	-0.1065*	-0.0559*
	(0.0056)	(0.0070)	(0.0058)	(0.0076)	(0.0099)	(0.0080)	(0.0082)	(0.0095)	(0.0083)
Senior Secondary	0.0031	-0.1652*	-0.0545*	0.0049	-0.1701*	-0.0463*	0.0051	-0.1459*	-0.0676*
	(0.0062)	(0.0092)	(0.0071)	(0.0087)	(0.0133)	(0.0098)	(0.0088)	(0.0120)	(0.0100)
Tertiary Education	0.0114	-0.1439*	-0.0796*	0.0076	-0.2317*	-0.0610*	0.0138	-0.1272*	-0.0861*
	(0.0090)	(0.0159)	(0.0134)	(0.0154)	(0.0345)	(0.0196)	(0.0113)	(0.0168)	(0.0182)
Spouse's Employment									
Employer	0.0922*	0.0279*	-0.0360*	0.0703*	0.0188***	-0.0489*	0.1106*	0.0348*	-0.0180***
	(0.0056)	(0.0074)	(0.0063)	(0.0078)	(0.0108)	(0.0086)	(0.0080)	(0.0094)	(0.0093)
Employee	-0.0136**	0.0439*	0.0151*	-0.0218**	0.0332*	0.0128***	-0.0031	0.0483*	0.0212**
	(0.0068)	(0.0079)	(0.0057)	(0.0098)	(0.0118)	(0.0077)	(0.0092)	(0.0097)	(0.0085)
Casual Worker	0.0539*	0.0680*	0.0035	-0.0079	0.0253*	0.0068	0.0002	0.0301	-0.0101
	(0.0054)	(0.0176)	(0.0134)	(0.0249)	(0.0095)	(0.0178)	(0.0262)	(0.0230)	(0.0080)
Unpaid Worker	-0.0032	0.0325*	-0.0224*	0.0442*	0.0959*	-0.0308*	0.0639*	0.0398*	-0.0015
	(0.0182)	(0.0066)	(0.0053)	(0.0073)	(0.0253)	(0.0071)	(0.0081)	(0.0087)	(0.0207)
Others	-0.0316*	-0.0171*	0.0176*	-0.0347*	-0.0129	0.0055	-0.0320*	-0.0259*	0.0355*
	(0.0055)	(0.0063)	(0.0045)	(0.0073)	(0.0090)	(0.0060)	(0.0082)	(0.0082)	(0.0068)
Income (Rp.)									
Household Income	0.0073*	-0.0238*	-0.0192*	0.0060**	-0.0367*	-0.0181*	0.0078*	-0.0111*	-0.0180*
	(0.0018)	(0.0029)	(0.0022)	(0.0028)	(0.0048)	(0.0030)	(0.0022)	(0.0033)	(0.0032)
Square of HH Income	0.0001	0.0009*	0.0007*	-0.00002	0.0011*	0.0005*	0.00002	0.0004**	0.0006*
	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0004)	(0.0001)	(0.0001)	(0.0002)	(0.0002)
Household Characteristics									
Birth Order	0.0048	0.1128*	0.0293*	0.0025	0.1440*	0.0212*	0.0055	0.0713*	0.0400*
	(0.0049)	(0.0066)	(0.0056)	(0.0069)	(0.0096)	(0.0076)	(0.0067)	(0.0085)	(0.0082)
Child Aged 0-5 years	-0.0024	-0.0788*	-0.0215*	-0.0065	-0.1061*	-0.0106	0.0020	-0.0440*	-0.0357*
	(0.0053)	(0.0070)	(0.0059)	(0.0075)	(0.0101)	(0.0080)	(0.0072)	(0.0090)	(0.0087)

Table 5A-13: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0022	-0.0979*	-0.0238*	0.0012	-0.1247*	-0.0158***	-0.0046	-0.0619*	-0.0348*
	(0.0053)	(0.0071)	(0.0059)	(0.0074)	(0.0102)	(0.0081)	(0.0073)	(0.0091)	(0.0087)
Child Aged 10-14 years	-0.0027	-0.0969*	-0.0214*	-0.0007	-0.1240*	-0.0116	-0.0027	-0.0596*	-0.0345*
	(0.0052)	(0.0069)	(0.0058)	(0.0073)	(0.0100)	(0.0079)	(0.0071)	(0.0089)	(0.0086)
Child Aged 15-17 years	-0.0036	-0.0504*	-0.0121*	-0.0017	-0.0683*	-0.0064	-0.0048	-0.0282*	-0.0193*
	(0.0035)	(0.0052)	(0.0042)	(0.0051)	(0.0077)	(0.0058)	(0.0045)	(0.0064)	(0.0061)
Number of Adults	-0.0099*	-0.0073*	0.0111*	-0.0095*	-0.0072*	0.0141*	-0.0090*	-0.0056*	0.0063*
	(0.0012)	(0.0015)	(0.0012)	(0.0017)	(0.0022)	(0.0016)	(0.0017)	(0.0020)	(0.0017)
Rural	0.0200*	0.0263*	0.0150*	0.0174*	0.0446*	0.0108*	0.0201*	0.0029	0.0201*
	(0.0033)	(0.0041)	(0.0030)	(0.0046)	(0.0060)	(0.0041)	(0.0045)	(0.0053)	(0.0044)
Community Characteristics									
Dwelling Ownership	-0.0002	-0.0005	-0.0011*	0.0002	0.0011**	-0.0010*	-0.0004	-0.0020*	-0.0013*
	(0.0003)	(0.0003)	(0.0003)	(0.0004)	(0.0048)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Improved Drinking Water	0.0003	-0.0001	-0.0010*	0.0009*	-0.0002	-0.0011*	-0.0006***	0.0004	-0.0010*
	(0.0002)	(0.0003)	(0.0002)	(0.0003)	(0.0004)	(0.0003)	(0.0003)	(0.0004)	(0.0003)
Improved Sanitation	0.0021*	0.0015*	-0.0001	0.0019*	0.0009**	0.0002	0.0023*	0.0015*	-0.0002
	(0.0002)	(0.0003)	(0.0003)	(0.0003)	(0.0005)	(0.0004)	(0.0003)	(0.0004)	(0.0004)
Source of Electricity	-0.0007*	-0.0014*	0.0008*	-0.0006**	-0.0011*	0.0005	-0.0005	-0.0012*	0.0010*
	(0.0002)	(0.0003)	(0.0002)	(0.0003)	(0.0004)	(0.0003)	(0.0003)	(0.0003)	(0.0004)
Number of Schools	-0.0193	0.0128	0.0275	-0.0409***	0.1014*	0.0099	0.0239	-0.0859*	0.0483***
	(0.0169)	(0.0210)	(0.0175)	(0.0235)	(0.0298)	(0.0239)	(0.0240)	(0.0287)	(0.0255)
Student-teacher Ratios	0.0352**	-0.0281	-0.0277***	0.0540**	-0.1163*	-0.0110	-0.0034	0.0754*	-0.0474**
	(0.0158)	(0.0197)	(0.0165)	(0.0219)	(0.0277)	(0.0225)	(0.0227)	(0.0273)	(0.0240)
GRDP	-0.0013*	-0.0008*	-0.0004**	-0.0014*	-0.0001	-0.0004***	-0.0011*	-0.0018*	-0.0003
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0003)	(0.0002)
Telephone	0.0108**	-0.0373*	-0.0382*	0.0051	-0.0925*	-0.0337*	0.0152*	-0.0057	-0.0350*
	(0.0047)	(0.0081)	(0.0063)	(0.0077)	(0.0143)	(0.0090)	(0.0058)	(0.0088)	(0.0086)
Computer	0.0251*	-0.0163	-0.0387*	0.0205***	-0.1557*	-0.0262***	0.0291*	0.0131	-0.0283**
	(0.0062)	(0.0127)	(0.0101)	(0.0123)	(0.0327)	(0.0157)	(0.0069)	(0.0121)	(0.0130)
Island									
Sumatera	-0.0364*	0.0262**	-0.0212**	-0.0402*	0.0841*	0.0129	-0.0376*	-0.0550*	-0.0497*
	(0.0093)	(0.0114)	(0.0106)	(0.0131)	(0.0170)	(0.0162)	(0.0128)	(0.0143)	(0.0141)

Table 5A-13: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years and by Gender, SUSENAS 2007 (*continued*).

Variables	All			Gender					
				Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Java	-0.0967*	0.0607*	0.0415*	-0.1108*	0.0666*	0.0810*	-0.0951*	0.0274	0.0091
	(0.0113)	(0.0142)	(0.0128)	(0.0165)	(0.0215)	(0.0190)	(0.0155)	(0.0173)	(0.0175)
Lesser Sunda Islands	-0.0320*	0.0389*	-0.0191***	-0.0452*	0.0541*	0.0112	-0.0184	0.0072	-0.0422*
	(0.0093)	(0.0113)	(0.0111)	(0.0132)	(0.0169)	(0.0168)	(0.0127)	(0.0140)	(0.0151)
Kalimantan	-0.0222**	0.0772*	-0.0047	-0.0342**	0.1043*	0.0292***	-0.0186	0.0325**	-0.0324**
	(0.0094)	(0.0113)	(0.0103)	(0.0135)	(0.0171)	(0.0160)	(0.0126)	(0.0135)	(0.0134)
Sulawesi	-0.0210**	0.0591*	-0.0144	-0.0102	0.1122*	0.0165	-0.0501*	-0.0245***	-0.0343**
	(0.0090)	(0.0112)	(0.0105)-	(0.0129)	(0.0169)	(0.0161)	(0.0125)	(0.0137)	(0.0138)
Maluku	-0.0127	-0.0701*	0.0509*	-0.0155	-0.0466**	-0.0129	-0.0144	-0.0995*	-0.0893*
	(0.0102)	(0.0141)	(0.0130)	(0.0146)	(0.0206)	(0.0188)	(0.0138)	(0.0182)	(0.0191)
Chi Squared	15436.99 (*d.f* 138)			9841.25 (*d.f* 135)			5961.86 (*d.f*135)		
Pseudo R-Squared	0.1462			0.1521			0.1497		
Number of Observations	51,654			29,341			22,293		

Notes:

g. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

h. Standard errors are reported in brackets.

Table 5A-14: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years by Gender and Region-Gender, SUSENAS 2007.

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-0.0036	-0.0097**	-0.0191*	-0.0333*	-0.1102*	-0.0051	-	-	-
	(0.0032)	(0.0039)	(0.0038)	(0.0034)	(0.0045)	(0.0033)			
Biological Child	-0.0792*	-0.1052*	0.0056	-0.0349*	-0.0589*	0.0125***	-0.0413*	-0.0756*	0.0111
	(0.0039)	(0.0051)	(0.0068)	(0.0057)	(0.0077)	(0.0065)	(0.0061)	(0.0080)	(0.0102)
Household Head's Characteristics									
Age	-0.0006*	-0.0015*	-0.0002	-0.0002	-0.0006**	-0.0002	-0.0004	-0.0017*	0.0004
	(0.0002)	(0.0002)	(0.0003)	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0004)
Female Headed	0.0918	-0.0775	0.0925	0.0344	-0.1078	0.1433*	0.1231	-0.0291	0.1441
	(0.3172)	(0.2343)	(0.1493)	(0.0739)	(0.1188)	(0.0490)	(0.1335)	(0.1593)	(0.2906)
Household Head's Education									
Completed Primary	-0.0235**	-0.0296*	-0.0160***	-0.0117***	-0.0288*	-0.0104***	-0.0287**	-0.0234***	-0.0132
	(0.0101)	(0.0095)	(0.0097)	(0.0068)	(0.0076)	(0.0063)	(0.0118)	(0.0127)	(0.0142)
Junior Secondary	-0.0246**	-0.0702*	-0.0276**	0.0015	-0.1171*	-0.0391*	-0.0225***	-0.0647*	-0.0250
	(0.0108)	(0.0107)	(0.0107)	(0.0079)	(0.0099)	(0.0080)	(0.0127)	(0.0143)	(0.0155)
Senior Secondary	-0.0230**	-0.1075*	-0.0427*	0.0040	-0.1806*	-0.0296*	-0.0319**	-0.1167*	-0.0498*
	(0.0108)	(0.0113)	(0.0110)	(0.0084)	(0.0121)	(0.0088)	(0.0130)	(0.0157)	(0.0162)
Tertiary Education	-0.0103	-0.0986*	-0.0515*	0.0238***	-0.2760*	-0.0415**	-0.0272***	-0.1600*	-0.0357
	(0.0117)	(0.0143)	(0.0150)	(0.0135)	(0.0311)	(0.0166)	(0.0154)	(0.0291)	(0.0224)
Household Head's Employment									
Employer	0.0444*	0.0119***	-0.0389*	0.0336*	0.0051	-0.0332*	0.0476*	0.0100	-0.0489*
	(0.0054)	(0.0065)	(0.0068)	(0.0062)	(0.0077)	(0.0055)	(0.0072)	(0.0091)	(0.0098)
Employee	-0.0110**	0.0036	-0.0004	-0.0025	0.0254*	0.0045	-0.0089	0.0116	-0.0036
	(0.0049)	(0.0051)	(0.0045)	(0.0066)	(0.0078)	(0.0050)	(0.0068)	(0.0071)	(0.0067)
Casual Worker	0.0006	0.0128	0.0132	0.0550*	-0.0286	0.0148	0.0123	0.0064	0.0191
	(0.0139)	(0.0141)	(0.0126)	(0.0159)	(0.0212)	(0.0123)	(0.0170)	(0.0194)	(0.0172)
Unpaid Worker	-0.0138	0.0107	-0.0044	0.0398*	-0.0006	-0.0466*	-0.0132	0.0200	-0.0346
	(0.0179)	(0.0191)	(0.0202)	(0.0142)	(0.0197)	(0.0173)	(0.0261)	(0.0270)	(0.0321)
Others	0.0039	0.0158***	0.0007	0.0246**	0.0313**	0.0098	0.0051	0.0195	0.0043
	(0.0087)	(0.0090)	(0.0081)	(0.0118)	(0.0143)	(0.0097)	(0.0120)	(0.0128)	(0.0115)

Table 5A-14: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 yearsby Gender and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0111	-0.0282*	-0.0243*	-0.0003	-0.0547*	-0.0113**	-0.0056	-0.0340*	-0.0257**
	(0.0082)	(0.0077)	(0.0076)	(0.0059)	(0.0065)	(0.0054)	(0.0100)	(0.0101)	(0.0108)
Junior Secondary	-0.0245*	-0.0651*	-0.0492*	0.0170**	-0.1478*	-0.0432*	-0.0162	-0.0634*	-0.0475*
	(0.0092)	(0.0093)	(0.0091)	(0.0074)	(0.0100)	(0.0078)	(0.0114)	(0.0123)	(0.0129)
Senior Secondary	-0.0263*	-0.0850*	-0.0652*	0.0285*	-0.2232*	-0.0508*	-0.0155	-0.0842*	-0.0693*
	(0.0094)	(0.0104)	(0.0101)	(0.0087)	(0.0149)	(0.0102)	(0.0118)	(0.0143)	(0.0145)
Tertiary Education	-0.038	-0.0795*	-0.0842*	0.0148	-0.2370*	-0.0735*	-0.0134	-0.1377*	-0.1015*
	(0.0107)	(0.0142)	(0.0162)	(0.0164)	(0.0351)	(0.0219)	(0.0155)	(0.0329)	(0.0267)
Spouse's Employment									
Employer	0.0824*	0.0385*	-0.0433*	0.0872*	0.0142	-0.0274*	0.0632*	0.0124	-0.0454*
	(0.0067)	(0.0084)	(0.0097)	(0.0080)	(0.0110)	(0.0086)	(0.0087)	(0.0122)	(0.0134)
Employee	0.0010	0.0312*	0.0093	-0.0247**	0.0497*	0.0214**	-0.0041	0.0225**	0.0134
	(0.0072)	(0.0077)	(0.0071)	(0.0106)	(0.0124)	(0.0085)	(0.0099)	(0.0111)	(0.0103)
Casual Worker	0.0227	0.0261	-0.0176	-0.0267	0.0214**	0.0182	0.0364	0.0361	-0.0115
	(0.0237)	(0.0223)	(0.0228)	(0.0253)	(0.0097)	(0.0171)	(0.0252)	(0.0284)	(0.0312)
Unpaid Worker	0.0383*	0.0271*	-0.0215**	0.0496*	0.0913*	-0.0134***	0.0286*	0.0187	-0.0237***
	(0.0070)	(0.0084)	(0.0090)	(0.0077)	(0.0249)	(0.0073)	(0.0087)	(0.0114)	(0.0128)
Others	-0.0092	-0.0007	-0.0015	-0.0546*	-0.0339*	0.0347*	-0.0135***	-0.0038	-0.0121
	(0.0062)	(0.0064)	(0.0056)	(0.0080)	(0.0095)	(0.0067)	(0.0078)	(0.0088)	(0.0081)
Income (Rp.)									
Household Income	0.0066*	-0.0078*	-0.0191*	0.0043	-0.0435*	-0.0182*	0.0029	-0.0193*	-0.0211*
	(0.0015)	(0.0025)	(0.0027)	(0.0038)	(0.0063)	(0.0043)	(0.0025)	(0.0050)	(0.0040)
Square of HH Income	-0.00004	0.0003**	0.0006*	0.0043	0.0435*	0.0007	0.00001	0.0005	0.0006*
	(0.00006)	(0.0001)	(0.0001)	(0.0038)	(0.0063)	(0.0007)	(0.0001)	(0.0005)	(0.0001)
Household Characteristics									
Birth Order	0.0088	0.0568*	0.0325*	0.0027	0.1464*	0.0271*	0.0030	0.0678*	0.0338*
	(0.0062)	(0.0078)	(0.0083)	(0.0069)	(0.0094)	(0.0074)	(0.0088)	(0.0112)	(0.0116)
Child Aged 0-5 years	-0.0053	-0.0302*	-0.0193**	-0.0030	-0.1086*	-0.0232*	-0.0011	-0.0456*	-0.0155
	(0.0068)	(0.0083)	(0.0087)	(0.0074)	(0.0100)	(0.0078)	(0.0095)	(0.0118)	(0.0123)

Table 5A-14: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 yearsby Gender and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0017	-0.0416*	-0.0276*	-0.0041	-0.1307*	-0.0216*	0.0058	-0.0508*	-0.0277**
	(0.0068)	(0.0084)	(0.0089)	(0.0074)	(0.0100)	(0.0079)	(0.0094)	(0.0119)	(0.0125)
Child Aged 10-14 years	-0.0074	-0.0476*	-0.0202**	-0.0005	-0.1251*	-0.0223*	0.0002	-0.0546*	-0.0194
	(0.0066)	(0.0082)	(0.0086)	(0.0072)	(0.0098)	(0.0077)	(0.0093)	(0.0117)	(0.0121)
Child Aged 15-17 years	-0.0103**	-0.0159*	-0.0155**	0.0001	-0.0713*	-0.0100***	-0.0060	-0.0171***	-0.0108
	(0.0044)	(0.0061)	(0.0063)	(0.0049)	(0.0074)	(0.0055)	(0.0063)	(0.0090)	(0.0089)
Number of Adults	-0.0100*	-0.0047**	0.0088*	-0.0095*	-0.0078*	0.0125*	-0.0071*	0.0002	0.0102*
	(0.0015)	(0.0018)	(0.0017)	(0.0017)	(0.0022)	(0.0016)	(0.0021)	(0.0026)	(0.0025)
Rural	-	-	-	-	-	-	-	-	-
Community Characteristics									
Dwelling Ownership	0.0005	-0.0006	-0.0001	-0.0006	0.0013*	-0.0023*	0.0001	0.0006	0.0006
	(0.0003)	(0.0004)	(0.0004)	(0.0004)	(0.0005)	(0.0004)	(0.0004)	(0.0006)	(0.0006)
Improved Drinking Water	0.0002	-0.0012*	-0.0010*	0.0003	0.0006	-0.0011*	0.0006	-0.0016*	-0.0016*
	(0.0003)	(0.0004)	(0.0004)	(0.0003)	(0.0004)	(0.0003)	(0.0004)	(0.0005)	(0.0005)
Improved Sanitation	0.0005***	0.0022*	0.0006	0.0031*	0.0007***	-0.0002	-0.0001	0.0022*	0.0014**
	(0.0003)	(0.0004)	(0.0005)	(0.0003)	(0.0004)	(0.0004)	(0.0004)	(0.0006)	(0.0007)
Source of Electricity	0.0006**	-0.0006	0.0006	-0.0015*	-0.0006	0.0006***	0.0005	-0.0008	-0.0003
	(0.0003)	(0.0004)	(0.0004)	(0.0003)	(0.0004)	(0.0003)	(0.0004)	(0.0005)	(0.0006)
Number of Schools	0.0025	0.0779*	0.0135	-0.0360	0.0385	0.0175	-0.0130	0.1266*	-0.0123
	(0.0229)	(0.0284)	(0.0285)	(0.0240)	(0.0299)	(0.0226)	(0.0302)	(0.0385)	(0.0413)
Student-teacher Ratios	-0.0040	-0.0778*	-0.0125	-0.0620*	-0.0569**	-0.0192	0.0063	-0.1189*	0.0202
	(0.0215)	(0.0267)	(0.0268)	(0.0225)	(0.0279)	(0.0213)	(0.0282)	(0.0359)	(0.0388)
GRDP	-0.0005**	-0.0004	-0.0003	-0.0019*	-0.0012*	-0.0002	-0.0007**	0.0002	0.00001
	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0003)	(0.0002)	(0.0003)	(0.0003)	(0.0004)
Telephone	0.0077***	-0.0320*	-0.0379*	-0.0006	-0.0624*	-0.0232**	-0.0011	-0.0753*	-0.0447*
	(0.0041)	(0.0063)	(0.0066)	(0.0097)	(0.0171)	(0.0114)	(0.0060)	(0.0117)	(0.0102)
Computer	0.0112**	-0.0118	-0.0297*	0.0338**	-0.0899*	-0.0337***	0.0126	-0.0755*	-0.0308***
	(0.0050)	(0.0093)	(0.0105)	(0.0137)	(0.0318)	(0.0191)	(0.0086)	(0.0250)	(0.0174)
Island									
Sumatera	-0.0192	0.0690*	-0.0602*	-0.0533*	-0.0013	-0.0062	-0.0098	0.0778**	-0.0679**
	(0.0150)	(0.0237)	(0.0191)	(0.0125)	(0.0153)	(0.0134)	(0.0208)	(0.0342)	(0.0289)

Table 5A-14: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 yearsby Gender and Region-Gender, SUSENAS 2007 (*continued*).

Variables	Region						Urban		
	Urban			Rural			Boys		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Java	-0.0481*	0.0691*	-0.0388***	-0.1367*	-0.0036	0.0988*	-0.0346	0.0309	-0.0547***
	(0.0173)	(0.0257)	(0.0222)	(0.0171)	(0.0210)	(0.0170)	(0.0244)	(0.0375)	(0.0332)
Lesser Sunda Islands	-0.0173	0.0569**	-0.0970*	-0.0474*	0.0206	0.0168	-0.0065	0.0368	-0.1326*
	(0.0158)	(0.0244)	(0.0214)	(0.0125)	(0.0152)	(0.0139)	(0.0220)	(0.0353)	(0.0319)
Kalimantan	-0.0305**	0.0937*	-0.0315***	-0.0214	0.0479*	0.0091	-0.0237	0.0928*	-0.0278
	(0.0152)	(0.0236)	(0.0184)	(0.0132)	(0.0155)	(0.0132)	(0.0209)	(0.0340)	(0.0279)
Sulawesi	-0.0374**	0.0625*	-0.0405**	-0.0221***	0.0291***	0.0073	-0.0104	0.0709**	-0.0422
	(0.0150)	(0.0235)	(0.0187)	(0.0127)	(0.0155)	(0.0135)	(0.0207)	(0.0342)	(0.0284)
Maluku	-0.0110	-0.0471	-0.0684*	-0.0163	-0.1165*	-0.0310***	-0.0042	-0.0480	-0.0619***
	(0.0156)	(0.0288)	(0.0223)	(0.0142)	(0.0189)	(0.0166)	(0.0218)	(0.0408)	(0.0326)
Chi Squared	4823.00 (*d.f* 135)			9365.20 (*d.f* 135)			2842.69 (*d.f* 132)		
Pseudo R-Squared	0.1591			0.1286			0.1678		
Number of Observations	19,385			32,269			10,303		

Notes:

c. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

d. Standard errors are reported in brackets.

Table 5A-15: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years by Region-Gender, SUSENAS 2007.

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Characteristics									
Girls	-	-	-	-	-	-	-	-	-
Biological Child	-0.0973*	-0.1138*	0.0029	-0.0276*	-0.0447*	0.0058	-0.0394*	-0.0702*	0.0207**
	(0.0053)	(0.0066)	(0.0089)	(0.0084)	(0.0114)	(0.0086)	(0.0074)	(0.0094)	(0.0100)
Household Head's Characteristics									
Age	-0.0008*	-0.0012*	-0.0008**	-0.0001	0.0001	-0.00002	-0.0004	-0.0015*	-0.0004
	(0.0003)	(0.0003)	(0.0004)	(0.0003)	(0.0004)	(0.0003)	(0.0003)	(0.0003)	(0.0003)
Female Headed	-0.3805	-0.0679	0.0646	0.1254	-0.0096	0.1690**	-0.0814	-0.1336	0.1869
	(0.4441)	(0.0842)	(0.1236)	(0.1296)	(0.1695)	(0.0794)	(0.1711)	(0.1449)	(0.2014)
Household Head's Education									
Completed Primary	0-0.0065	-0.0429*	-0.0200	-0.0132	-0.0279**	-0.0109	-0.0078	-0.0287*	-0.0106
	(0.0189)	(0.0141)	(0.0130)	(0.0091)	(0.0109)	(0.0084)	(0.0101)	(0.0098)	(0.0095)
Junior Secondary	-0.0178	-0.0758*	-0.0326**	0.0045	-0.1338*	-0.0354*	-0.0002	-0.0906*	-0.0456*
	(0.0202)	(0.0160)	(0.0144)	(0.0107)	(0.0141)	(0.0107)	(0.0115)	(0.0131)	(0.0121)
Senior Secondary	0.0059	-0.0955*	-0.0361**	0.0110	-0.2101*	-0.0232**	-0.0035	-0.1358*	-0.0406*
	(0.0196)	(0.0162)	(0.0147)	(0.0116)	(0.0171)	(0.0118)	(0.0121)	(0.0162)	(0.0132)
Tertiary Education	0.0216	-0.0815*	-0.0564*	0.0408**	-0.3526*	-0.0362	0.0006	-0.1722*	-0.0459***
	(0.0204)	(0.0189)	(0.0197)	(0.0199)	(0.0467)	(0.0222)	(0.0176)	(0.0375)	(0.0247)
Household Head's Employment									
Employer	0.0329*	0.0046	-0.0244*	0.0488*	0.0203***	-0.0420*	0.0067	0.0221**	-0.0201**
	(0.0080)	(0.0093)	(0.0092)	(0.0086)	(0.0109)	(0.0072)	(0.0086)	(0.0105)	(0.0087)
Employee	-0.0140**	-0.0070	0.0033	0.0038	0.0385*	0.0039	-0.0091	0.0054	0.0049
	(0.0071)	(0.0072)	(0.0060)	(0.0092)	(0.0110)	(0.0066)	(0.0092)	(0.0105)	(0.0076)
Casual Worker	-0.0153	0.0181	0.0031	0.0423***	-0.0183	0.0165	0.0694*	-0.0419	0.0135
	(0.0234)	(0.0203)	(0.0192)	(0.0238)	(0.0298)	(0.0161)	(0.0202)	(0.0291)	(0.0191)
Unpaid Worker	-0.0143	-0.0104	0.0249	0.0540*	0.0173	-0.0594**	0.0176	-0.0296	-0.0257
	(0.0234)	(0.0268)	(0.0245)	(0.0198)	(0.0282)	(0.0242)	(0.0197)	(0.0255)	(0.0243)
Others	-0.0019	0.0028	-0.0057	0.0333**	0.0204	0.0123	0.0113	0.0426**	0.0069
	(0.0121)	(0.0125)	(0.0117)	(0.0169)	(0.0208)	(0.0127)	(0.0158)	(0.0175)	(0.0153)

Table 5A-15: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 years by Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Spouse's Characteristics									
Spouse's Education									
Completed Primary	-0.0172	-0.0106	-0.0241**	0.0010	-0.0616*	-0.0014	-0.0019	-0.0458*	-0.0253*
	(0.0133)	(0.0119)	(0.0107)	(0.0080)	(0.0093)	(0.0072)	(0.0087)	(0.0085)	(0.0080)
Junior Secondary	-0.0304**	-0.0562*	-0.0534*	0.0190***	-0.1625*	-0.0334*	0.0140	-0.1258*	-0.0575*
	(0.0147)	(0.0143)	(0.0127)	(0.0102)	(0.0140)	(0.0105)	(0.0105)	(0.0134)	(0.0114)
Senior Secondary	-0.0336**	-0.0709*	-0.0637*	0.0200	-0.2274*	-0.0369*	0.0382*	-0.2250*	-0.0689*
	(0.0148)	(0.0152)	(0.0139)	(0.0123)	(0.0202)	(0.0136)	(0.0118)	(0.0231)	(0.0152)
Tertiary Education	-0.0190	-0.0707*	-0.0636*	0.0127	-0.2694*	-0.0373	0.0094	-0.2042*	-0.1337*
	(0.0159)	(0.0181)	(0.0196)	(0.0253)	(0.0529)	(0.0274)	(0.0203)	(0.0423)	(0.0395)
Spouse's Employment									
Employer	0.0977*	0.0576*	-0.0424*	0.0648*	0.0218	-0.0464*	0.1062*	0.0058	0.0003
	(0.0105)	(0.0116)	(0.0144)	(0.0113)	(0.0158)	(0.0114)	(0.0112)	(0.0139)	(0.0135)
Employee	0.0056	0.0382*	0.0063	-0.0355**	0.0390**	0.0129	-0.0079	0.0603*	0.0380*
	(0.0107)	(0.0107)	(0.0097)	(0.0150)	(0.0181)	(0.0110)	(0.0144)	(0.0152)	(0.0136)
Casual Worker	-0.0594	0.1138	-0.0001	-0.0460	0.1392*	0.0196	0.0003	0.0310	0.0175
	(0.0653)	(0.1139)	(0.0317)	(0.0376)	(0.0368)	(0.0222)	(0.0316)	(0.0308)	(0.0273)
Unpaid Worker	0.0470*	0.0325*	-0.0173	0.0452*	0.0249***	-0.0257*	0.0562*	0.0227***	0.0053
	(0.0113)	(0.0122)	(0.0126)	(0.0105)	(0.0138)	(0.0094)	(0.0112)	(0.0126)	(0.0119)
Others	-0.0058	-0.0006	0.0119	-0.0518*	-0.0200	0.0187**	-0.0694*	-0.0537*	0.0602*
	(0.0100)	(0.0095)	(0.0078)	(0.0108)	(0.0135)	(0.0086)	(0.0125)	(0.0126)	(0.0109)
Income (Rp.)									
Household Income	0.0077*	-0.0020	-0.0153*	0.0067	-0.0518*	-0.0178*	-0.0019	-0.0327*	-0.0187**
	(0.0019)	(0.0033)	(0.0036)	(0.0056)	(0.0088)	(0.0053)	(0.0058)	(0.0090)	(0.0086)
Square of HH Income	-0.0001	0.00004	0.0005*	0.0002	0.0021	0.0007	0.0012***	0.0023	0.0007
	(0.0001)	(0.0002)	(00002)	(0.0006)	(0.0013)	(0.0007)	(0.0007)	(0.0016)	(0.0020)
Household Characteristics									
Birth Order	0.0131	0.0398*	0.0311*	0.0023	0.1837*	0.0132	0.0017	0.0966*	0.0478*
	(0.0087)	(0.0108)	(0.0119)	(0.0096)	(0.0134)	(0.0098)	(0.0095)	(0.0122)	(0.0111)
Child Aged 0-5 years	-0.0141	-0.0113	-0.0234***	-0.0097	-0.0138*	-0.0079	0.0062	-0.0719*	-0.0455*
	(0.0094)	(0.0114)	(0.0126)	(0.0103)	(0.0142)	(0.0104)	(0.0102)	(0.0129)	(0.0118)

Table 5A-15: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 yearsby Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Child Aged 6-9 years	-0.0099	-0.0286**	-0.0275**	-0.0017	-0.1631*	-0.0082	-0.0061	-0.0875*	-0.0421*
	(0.0096)	(0.0117)	(0.0127)	(0.0103)	(0.0143)	(0.0105)	(0.0103)	(0.0131)	(0.0118)
Child Aged 10-14	-0.0145	-0.0345*	-0.0212***	-0.0013	-0.1593*	-0.0067	0.0022	-0.0788*	-0.0453*
years	(0.0093)	(0.0114)	(0.0124)	(0.0100)	(0.0140)	(0.0103)	(0.0101)	(0.0128)	(0.0117)
Child Aged 15-17	-0.0152**	-0.0113	-0.0212**	0.0006	-0.0958*	-0.0042	-0.0005	-0.0407*	-0.0178**
years	(0.0060)	(0.0079)	(0.0089)	(0.0071)	(0.0107)	(0.0074)	(0.0064)	(0.0093)	(0.0083)
Number of Adults	-0.0108*	-0.0069*	0.0065*	-0.0108*	-0.0110*	0.0165*	-0.0068*	-0.0027	0.0063**
	(0.0022)	(0.0025)	(0.0023)	(0.0024)	(0.0031)	(0.0021)	(0.0024)	(0.0029)	(0.0024)
Rural	-	-	-	-	-	-	-	-	-
Community Characteristics									
Dwelling Ownership	0.0011**	-0.0016*	-0.0009***	0.0002	0.0022*	-0.0020*	-0.0015*	-0.0002	-0.0028*
	(0.0005)	(0.0006)	(0.0005)	(0.0005)	(0.0007)	(0.0005)	(0.0006)	(0.0007)	(0.0006)
Improved Drinking	-0.0003	-0.0007	-0.0004	0.0011*	0.0004	-0.0010**	-0.0009***	0.0008	-0.0012**
Water	(0.0004)	(0.0005)	(0.0005)	(0.0004)	(0.0005)	(0.0004)	(0.0004)	(0.0005)	(0.0005)
Improved Sanitation	0.0012**	0.0016**	-0.0002	0.0030*	0.0002	-0.0003	0.0031*	0.0011**	-0.00002
	(0.0005)	(0.0006)	(0.0006)	(0.0005)	(0.0006)	(0.0005)	(0.0004)	(0.0005)	(0.0006)
Source of Electricity	0.0008***	0.0003	0.0014**	-0.0015*	-0.0007	0.0009**	-0.0013*	-0.0006	0.0002
	(0.0004)	(0.0005)	(0.0006)	(0.0004)	(0.0006)	(0.0004)	(0.0004)	(0.0005)	(0.0005)
Number of Schools	0.0350	0.0373	0.0552	-0.0608***	0.1148*	0.0118	-0.0002	-0.0819**	0.0218
	(0.0343)	(0.0419)	(0.0389)	(0.0329)	(0.0418)	(0.0298)	(0.0348)	(0.0412)	(0.0345)
Student-teacher Ratios	-0.0284	-0.0455	-0.0604***	0.0845*	-0.1402*	-0.0181	0.0282	0.0774**	-0.0176
	(0.0323)	(0.0397)	(0.0366)	(0.0306)	(0.0389)	(0.0281)	(0.0327)	(0.0389)	(0.0326)
GRDP	-0.0001	-0.0009**	-0.0005	-0.0018*	-0.0002	-0.0005***	-0.0019*	-0.0029*	0.0001
	(0.0003)	(0.0004)	(0.0003)	(0.0004)	(0.0004)	(0.0003)	(0.0004)	(0.0004)	(0.0003)
Telephone	0.0160*	-0.0106	-0.0252*	0.0058	-0.0705*	-0.0146	-0.0059	-0.0492**	-0.0352**
	(0.0056)	(0.0077)	(0.0083)	(0.0141)	(0.0242)	(0.0149)	(0.0125)	(0.0228)	(0.0176)
Computer	0.0099	-0.0087	-0.0183	-0.0040	-0.2035*	-0.0187	0.0554*	0.0190	-0.0383
	(0.0064)	(0.0103)	(0.0125)	(0.0260)	(0.0580)	(0.0269)	(0.0148)	(0.0308)	(0.0270)
Island									
Sumatera	-0.0339	0.0375	-0.0407	-0.0554*	0.0850*	0.0371***	-0.0549*	-0.1148*	-0.0437**
	(0.0213)	(0.0318)	(0.0248)	(0.0176)	(0.0227)	(0.0204)	(0.0173)	(0.0192)	(0.0185)

Table 5A-15: Multinomial Logit (Marginal Effects) of Child Activities of Working Children Aged 15-17 yearsby Region-Gender, SUSENAS 2007 (*continued*).

Variables	Urban			Rural					
	Girls			Boys			Girls		
	School and Work	Work Only	Neither	School and Work	Work Only	Neither	School and Work	Work Only	Neither
Java	-0.0772*	0.0793**	-0.0119	-0.1481*	0.0598***	0.1421*	-0.1245*	-0.0741*	0.0643*
	(0.0245)	(0.0350)	(0.0295)	(0.0238)	(0.0305)	(0.0248)	(0.0241)	(0.0269)	(0.0245)
Lesser Sunda Islands	-0.0351	0.0629***	-0.0460	-0.0678*	0.0589*	0.0631*	-0.0211	-0.0378**	-0.0239
	(0.0223)	(0.0331)	(0.0283)	(0.0176)	(0.0225)	(0.0211)	(0.0171)	(0.0190)	(0.0194)
Kalimantan	-0.0482**	0.0656**	-0.0252	-0.0368**	0.1015*	0.0439**	-0.0082	-0.0152	-0.0160
	(0.0216)	(0.0316)	(0.0239)	(0.0187)	(0.0232)	(0.0203)	(0.0177)	(0.0187)	(0.0179)
Sulawesi	-0.0777*	0.0230	-0.0290	-0.0115	0.1203*	0.0378***	-0.0436**	-0.0865*	-0.0075
	(0.0216)	(0.0317)	(0.0240)	(0.0177)	(0.0229)	(0.0207)	(0.0178)	(0.0196)	(0.0187)
Maluku	-0.0174	-0.0624	-0.0664**	-0.0189	-0.0702**	0.0100	-0.0161	-0.1568*	-0.0718*
	(0.0221)	(0.0399)	(0.0314)	(0.0200)	(0.0275)	(0.0238)	(0.0195)	(0.0244)	(0.0253)
Chi Squared	2617.20 (*d.f* 132)			5252.49 (*d.f* 132)			3657.19 (*d.f* 132)		
Pseudo R-Squared	0.1967			0.1151			0.1400		
Number of Observations	9,042			19,013			13,256		

Notes:

c. * statistically significant at 1% level, ** statistically significant at 5% level, *** statistically significant at 10% level.

d. Standard errors are reported in brackets.

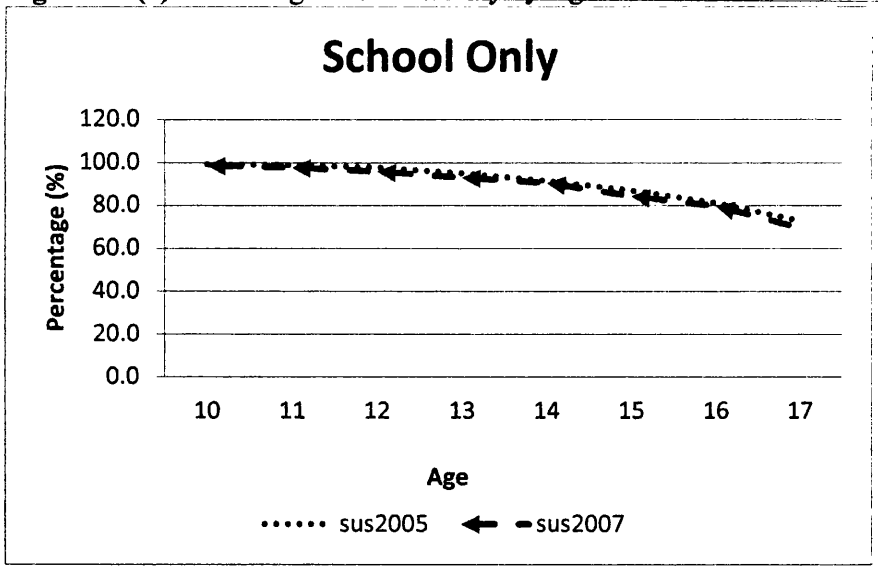
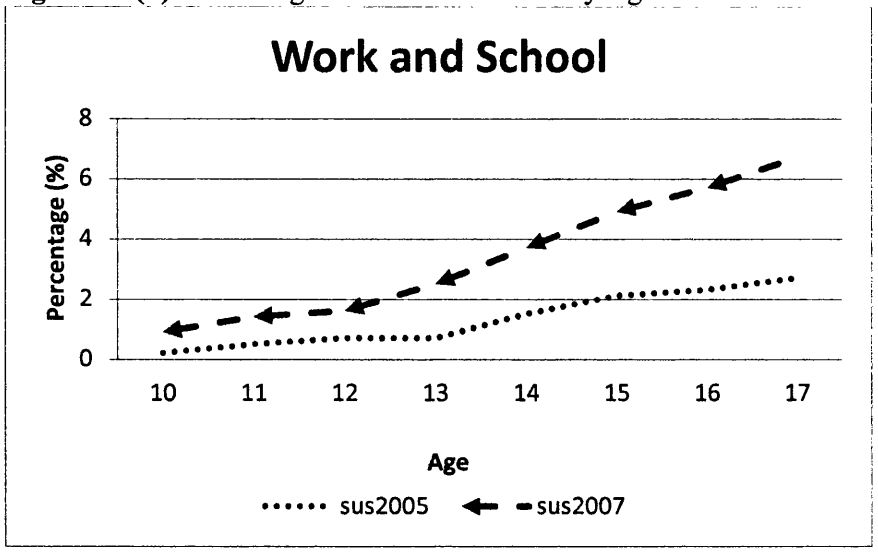


Figure 5-5(b): Percentage of Work and School by Age



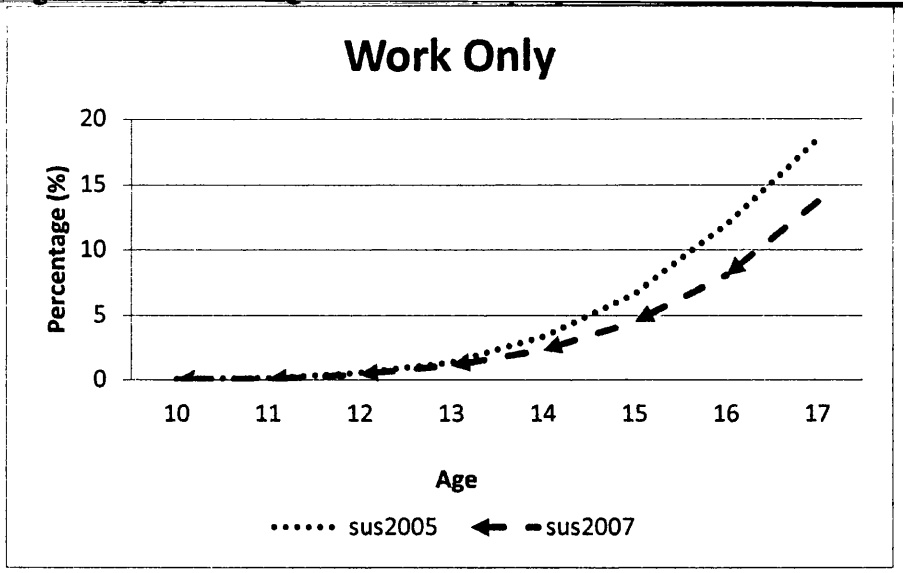
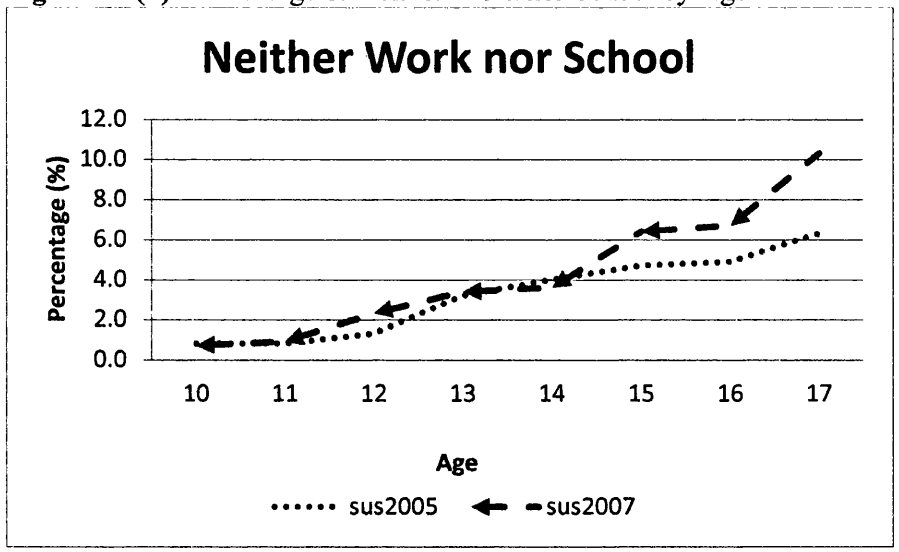


Figure 5-5(d): Percentage of Neither Work nor School by Age



Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

Figure 5-6(a): Percentage of School Only by Age

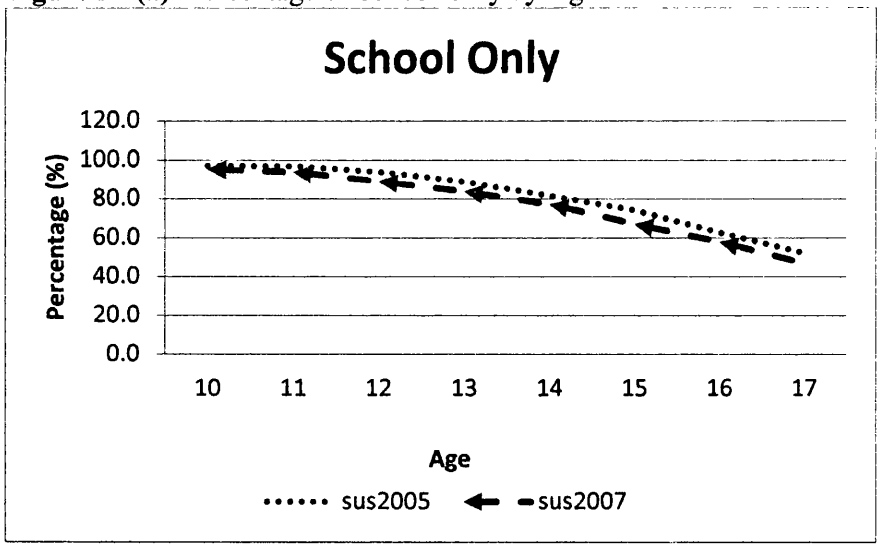


Figure 5-6(c): Percentage of Work only by Age

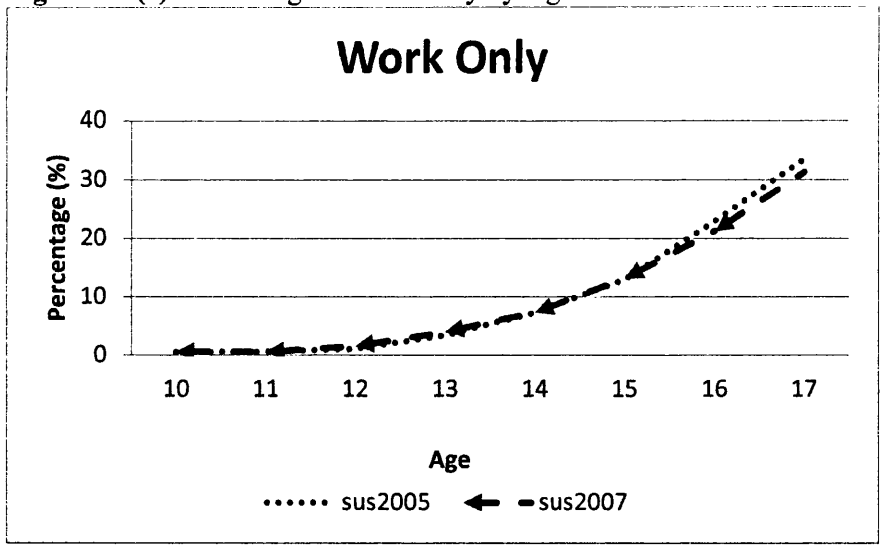


Figure 5-6(b): Percentage of Work and School by Age

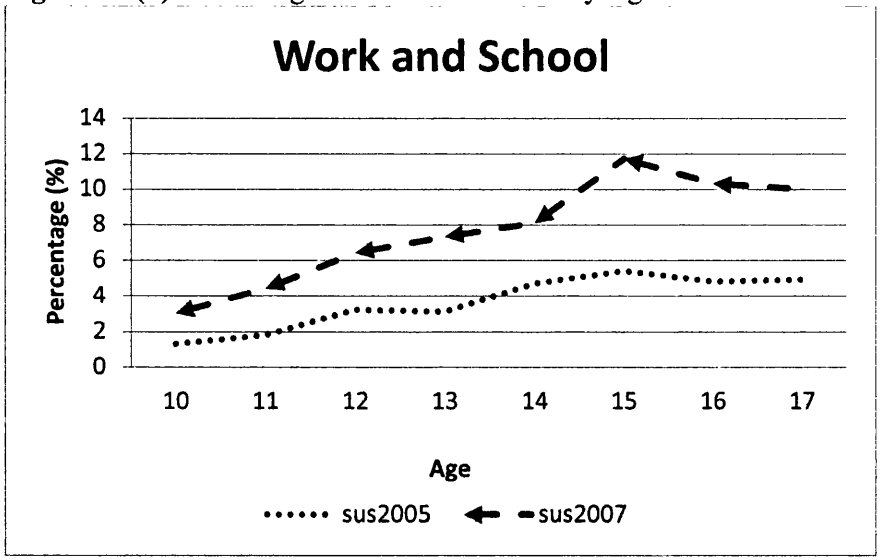
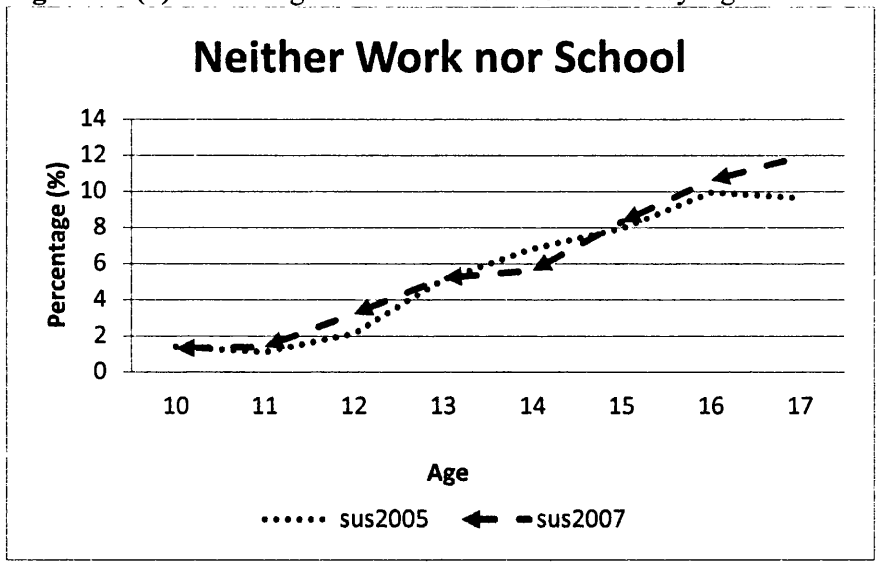


Figure 5-6(d): Percentage of Neither Work nor School by Age



Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

Figure 5-7(a): Percentage of School Only by Age

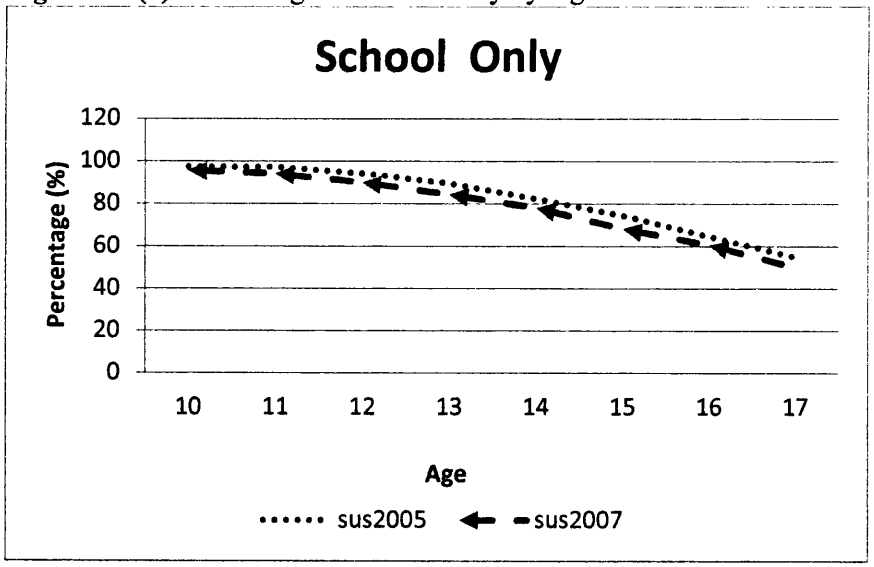


Figure 5-7(c): Percentage of Work Only by Age

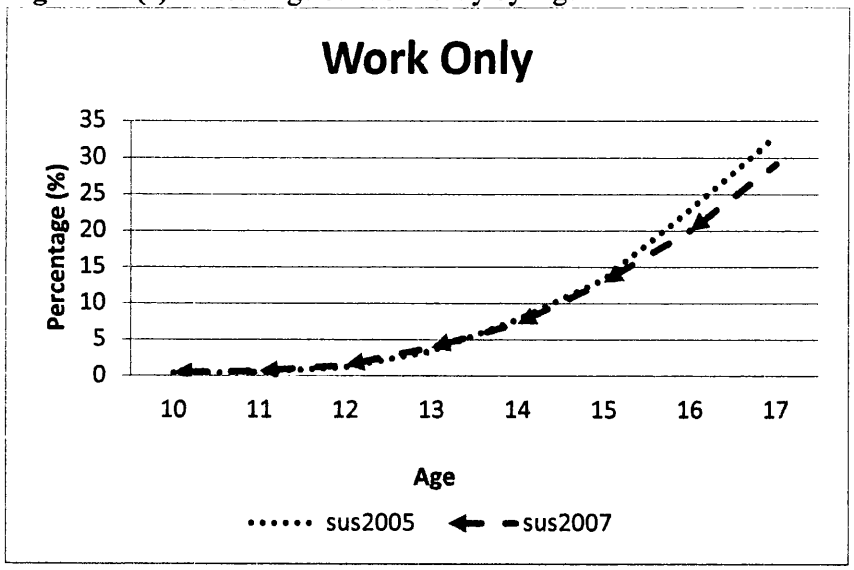


Figure 5-7(b): Percentage of Work and School by Age

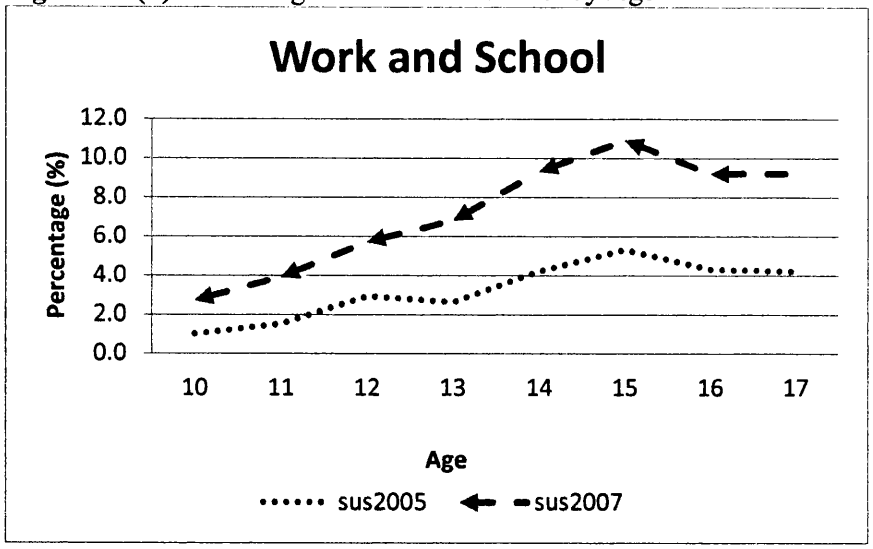
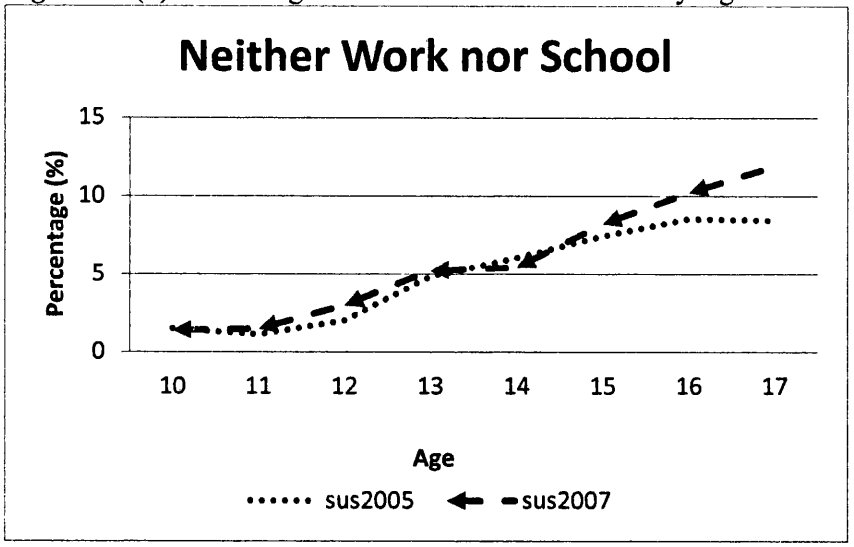


Figure 5-7(d): Percentage of Neither Work nor School by Age



Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

Figure 5-8(a): Percentage of School only by Age

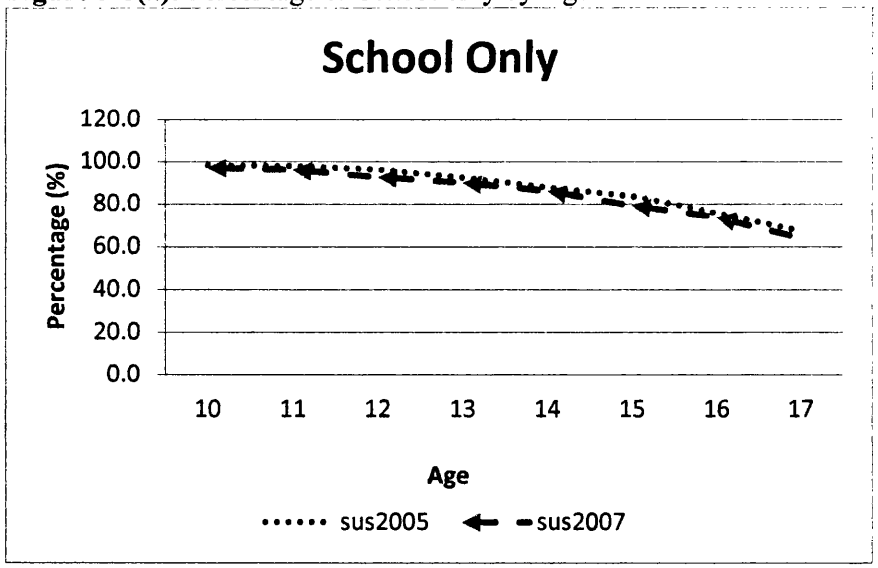


Figure 5-8(c): Percentage of Work Only by Age

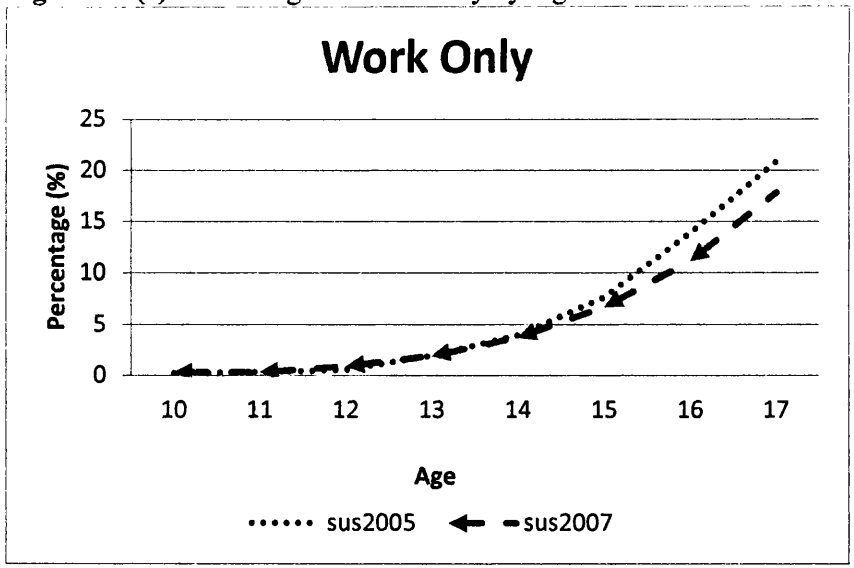


Figure 5-8(b): Percentage of Work and School by Age

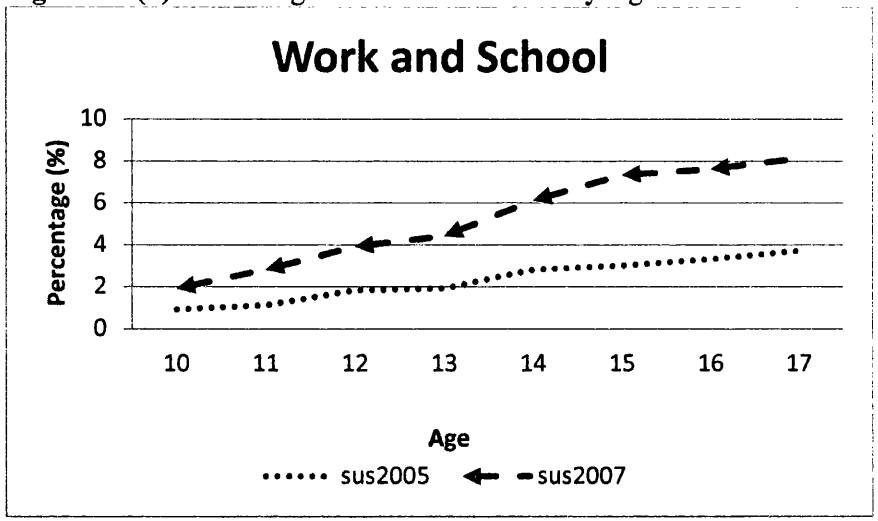
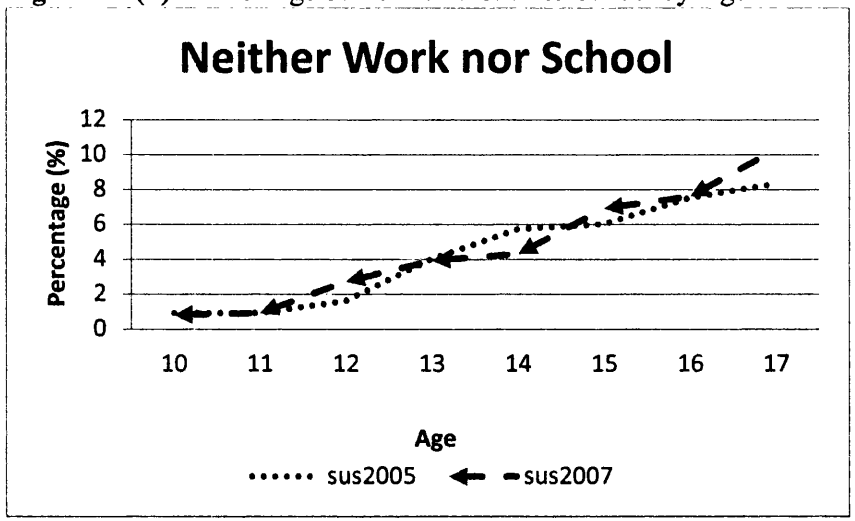


Figure 5-8(d): Percentage of Neither Work nor School by Age



Note: sus2005 = SUSENAS 2005, sus2007 = SUSENAS 2007.

CHAPTER 6: GENDER PREFERENCE AND GENDER DIFFERENTIALS IN CHILDREN'S TIME ALLOCATION

6.1 Introduction

Gender preferences for children are widely discussed around the world. The considerable attention that has been devoted to this issue is parental gender differences which can contribute to discriminatory practices against children. Consequently, these practices may have unfavourable social and demographic consequences. In particular, having a particular gender preference can lead to gender-selective abortions, which generate an imbalance in the gender ratio of the population. This problem will cause a delay in the age of marriage, or an increase in the number of people who never marry (Hank and Kohler, 2000). According to Fuse (2010), the problem of gender preferences also result in gender differentials in infant and child mortality. In society where adults favour boys than girls, female child mortality rates exceed male child mortality. In addition, gender preference also brings about gender bias in the household in the provision of basic care, such as nutrition, immunization, medical treatment, and in time allocation. Thus, this may affect the health and well-being of children (Fuse, 2010). A major discussion regarding gender differences are degree of preference for sons, which is widely manifested in East and South Asia, including China, South Korea and India.

A strong son preference indicates a strong preference for male as opposed to female offspring (Jensen 2002; Basu and De Jong, 2010). According to Basu and De Jong (2010), this condition is reflected in son targeting fertility behaviour, which is also referred as differential stopping behaviour or male-preferring stopping rules (see also Clark, 2000). Gender composition of current children will determine the subsequent fertility behaviour of families. In other words, parents or couples will continue

childbearing until they reach their desired number of sons or when they have a maximum number of children that they determine to be reasonable based on the availability of resources. In particular, the intra-household allocation of resources might be skewed in favour of boys relative to girls.

Son preference influences parental decisions towards their children and child outcomes in many developing countries. However, the condition is a persistent phenomenon in many low-income countries, especially in Asia, North Africa and the Middle East (Koolwal, 2007). Furthermore, strong son preferences generally cause higher fertility. In other words, families with higher proportion of daughters have additional births because of the preference for sons and repeat attempts to conceive a son. As a result, the proportion of households having another child is higher in families with many daughters rather than sons (Aly and Shields, 1991). According to Koolwal (2007), son preference behaviour stems primarily from patriarchal kinship systems, where men are the bearers of family name, to continue the family lineage (see also Haughton and Haughton, 1995). In Indonesia, based on Islamic inheritance principles, only the son of the family inherits the family estate, especially within a nuclear family (Carranza, 2012). In addition, parents may prefer sons over daughters when the perceived net value is higher for sons than that of daughters because sons can help their family if they have family farm, might replace the older members when they retire, and daughters have much less to offer as they move away from their parental homes after marriage. According to Kevane and Levine (2003), son preference in Indonesia has weakened, and there is no problem of "missing daughters". During the cohorts born between the 1940s and the 1990s, patterns of births, birth spacing and nutrition allocations show a small preference for sons. However, gender differences in educational attainment and inheritance were quite prevalent until the recent past.

In India, parents of a girl are required to pay all marriage costs and provide a large dowry for the groom's family. After marriage, a girl becomes a member of her husband's family and does not have much interaction with her own family (Pande and Astone, 2007). In addition, a belief of Hindus says that a dead parent's soul can attain heaven only if his or her son(s) leads the funeral pyre. They also believe that salvation can be achieved through sons who are obligated to worship ancestors. The prevalence of son preference in Vietnam is because they are perceived as better providers of old-age support for parents than daughters. Girls usually move away from their families after marriage, hence the family desires a son rather than daughter (Haughton and Haughton, 1998). Hence, daughters are not expected to be the primary source of old-age support. In rural China, a woman without a son is vulnerable to terrible taunts by her neighbours in her community. Consequently, women who fail to have a son are likely to be subjected to ill-treatment. Therefore, these conditions strengthen the preference for a son rather than daughter in certain countries. The desire to have a son may affect fertility attitudes and behaviour among women. Hence, our first concern is to investigate whether the preference for sons is an important factor in explaining the desire for future birth, which is mainly focused on maternal characteristics.

In addition to playing, children are frequently involved in variety of activities, where their time allocation is decided by parents. Some of these activities are geared to human capital accumulation, to the production of marketable outputs or activity that involves the provision of services for family members. The most common form of services for family members provided by children is helping with chores. In addition, there are large gender gaps in the hours of housework, where girls performed more household tasks than boys. The reason behind this is doing housework contributes little to sons' human capital build-up, thus, parents are more likely to have their sons either engaged in

education or other training activities. Consequently, girls end up spending most of their time on household chores as opposed to boys. According to Lin and Adsera (2012), parents in Indian society belief that girls should be good at doing household chores in order to be socially fit once they enters adulthood. In addition, helping with daily house work is a way for parents to ask the daughter to contribute to the family before she leaves her biological family once she is married. In the context of labour, earnings of boys are found to be higher than those of girls even after controlling for differences in many aspects such as work experience, hours worked, and human capital investments in schooling (Behrman et al, 1986). Generally, households continue childbearing until they reach the desired number of sons raising fertility rates and reducing the resources available to children, more particularly girls, who are disadvantaged. Furthermore, opportunities for women in labour market are limited and remain more constrained than those for men in most countries. In terms of human capital accumulation, parents would rather have sons engaged in education, or other training activities because they are expected to generate income for the family in future.

In particular, in certain low income countries, such as in south Asia, more boys are enrolled in primary school compared to girls, and the gaps widen for secondary education. As stated by Alderman and King (1998), these gaps are due to the influence of culture, where Islam predominates, such as Malaysia and Indonesia. In addition, according to World Bank (1996a), the ratio of boys to girls in both primary and secondary schools in middle-income countries is 1.03. Furthermore, the departure of daughters after their marriage to their marital homes reduces the incentives for parents to invest in their education as a long-term investment. Hence, children with higher earning potential will be treated more favourably and receive disproportionate household resources (Lin and Adsera, 2012). Hence, the next concern is to examine the

gender differentials in the time allocation in children activity, and whether son preference explained the differences. The time allocation is separated to hours spent on schooling, hours spent on house work and hours devoted to market work. The tested hypothesis of this analysis is that the prevalence of son preference indicates that girls will have less leisure time compared to the boys. In addition, this chapter also provides a decomposition analysis in order to examine the factors that influence the time allocation behaviour of girls and boys in each activity.

The remainder of this chapter is structured as follows. Section 6.2 briefly discusses gender differences in Indonesia. Section 6.3 gives empirical overview of gender preference, while a theoretical modelling is given in Section 6.4. Sections 6.5 and 6.6 describe the data, dependent variable and independent variables used in this chapter. Section 6.7 outlines the estimation methodology. The empirical results are discussed in Section 6.8 and Section 6.9 concludes the chapter.

6.2 Gender Differences in Indonesia

Indonesia is known as the fourth most populous country in the world with enormous cultural and economic diversity. Until the 1997 financial crisis, the growth rate of real per annual capita GDP was 3.9%. However, per capita income was only $US 880 per year in 1996 (Asian Development Bank, 1997). As a result, there are remarkable improvements in health status. In addition, between 1960 and 1995, life expectancy at birth increased by 24% to 59 years and child mortality reduced by 68% to 111 per thousand (Kevane and Levine, 2003). However, there are potentially significant economic and social differences between men and women in Indonesia. Women's

disadvantage can be seen in years of education they receive, their income stream, opportunities to engage in formal sector employment, in marriage choice and access to pensions.

In terms of cultural and social norms, Kreager and Schroder-Butterfill (2009) have discussed gender preferences among Javanese and Minangkabau families. For Javanese families, the role of spouses and daughters is important for assistance in livelihood or personal care in later life. In particular, childless elders are much more likely to find nieces or other family kin to adopt with the intention of their intimate personal care (include providing food) and companionship. In addition, despite the moving of daughters after marriage, elders in almost all cases desire a daughter living near them. In most cases, staying near the elders can create a family network to provide meals, companionship and personal care; however, the arrangements are often changeable, depending on who is available (which usually refers to better-off families). In addition, Javanese custom also ties up with the tradition that the youngest daughter will take care of her parents and will receive a house, and more likely will inherit property than her older sisters (Kevane and Levine, 2003).

Minangkabau population in Indonesia is known as the world's second largest matrilineal population, where the rights and property are passed on from mothers to daughters, and women take major roles in the management of family affairs in collaboration with their brothers. And for men, even though they have their own children, look to their sister's children as their heirs. The sons of Minangkabau families cannot inherit and pass on property, and a matriline without a daughter is considered childless no matter how many sons and successful sons it has. In other words, a matriline without daughters is considered to have no future and the kinship is referred to

as an extinct family. Normative preference to stay in the matriline's ancestral home is for the senior female and the daughter who succeeds her, while the husband of the senior female together takes the major formal and practical role in household decision-making. However, daily support for elderly people comes from both their sons and daughters, depending on their capacity and capability.

Gender differences among children in Indonesia still especially occur in the school enrolment. The reasons behind this condition are differential opportunity costs of schooling for both genders, and gender differences in traits, gender specialization in jobs and gender discrimination in the labour market. For example, school-age girls are generally more valuable in child care of their siblings and doing household chores, the opportunity cost in terms of home production is greater for the girls than boys. However, in terms of market wages , the opportunity cost of schooling may be greater for the male compared to the female. In particular, the gap in enrolment rates between the boys and girls in Indonesia starts revealing itself around secondary school age, which is 12 years, and increases gradually through age of 23 years (Deolalikar, 1993). Moreover, adult women face substantial discrimination, where 93% of managers of formal enterprises are male and over 98% of village heads are male (Kevane and Levine, 2003).

6.3 Empirical Overview

According to Das Gupta et al. (2003), the existence of son preference is different in East and South Asia. In particular, preferential treatment usually is given to boys in medical care, food allocation, and educational opportunities (Arnold, 1997). In India, the need to pay dowries for daughters increases the demand for sons compared to daughters.

Patriarchal family systems with a low female autonomy have strengthened son preference in South Korea. However, in China, the one-child policy, which began in 1979, raises discrimination against daughters. Patrilineal kinship system in these three countries ensure that parents can benefit little from daughters and have strong economic incentives to prefer raising sons even if adult women are economically active.

To examine the effect of son preference on the hazards of having additional children in China, Dudley (2002), using 1998 data from the Two-per-thousand National Sample Survey on Fertility and Contraception (NSSFC) estimated Cox proportional hazards model. His hypothesis is to test if the presence of a daughter increases the probability of women with one birth to have a second birth. Next is to ascertain the existence of increasing the probability of having a third birth among Chinese women with two births (daughters). For both analyses, the main covariate is whether the previous births were girls, with control for another seven covariates of women's characteristics, known to have independent effect on the transition to the next birth. Dudley also underlines that there is no son preference if there is no association between the gender of already born child and the likelihood of having another. In other words, this is based on the presumption that son preference arises when women have next birth if an earlier-born child is a girl and not a boy. The results show that women whose first child is a daughter have a significant (positive) hazard coefficient of 0.17 on the probability of having a second birth. By taking the antilog of the hazard coefficients to get hazard ratios, values of this exponentiated coefficient shows that having a daughter as the first child instead of a son increases the hazard of having a next birth by 18%. For women with the first two births of girls, the hazard of moving to a third birth is 57% higher than that of women with the first two births of boys. However, the hazard coefficients were less for women with one of each gender children. In particular, the hazard of moving to the next

birth for women with the first child being a girl and then a boy is not statistically different from zero. For women with their first child being boy and then a girl, the hazard of moving to a third was about 5% greater than if the two births were boys. The positive and very high hazard coefficient indicates that Chinese women are much more likely to bear one or more sons, especially if the earlier-born children are both girls. Women in the sample were asked regarding their first child, whether they have the first birth before or after the implementation of one-child policy, which is introduced in 1979. Thus, if a woman had her first child prior to 1979, the hazard of having a second birth is 75 percent higher than if a woman had her first child after the implementation of the one-child policy.

Based on cross-sectional data of married women below 50 years of age in Pakistan, Ali (1989) found there is a demand for additional children if the family has at least one son, which indicates a prevalence of son preference. The dependent variable 'desire for future births' was used in multiple classification analysis (MCA) to measure the net effect of each predictor. Then, to reduce the influence of parity and desired age to have more children, the analysis is further limited to married woman under the age of 40 years. The desire to have more children decreases as their age increases and is higher in urban areas than in rural areas for nearly all parity and age groups. A family with two children gives two results—those with two sons are more likely to have more children than those with two daughters. Additionally, an increase in the number of living sons leads the increase by 27% of women to cease childbearing, which is found in the families with three or more children. Multivariate analysis shows the low effect of wife's education and age at marriage on desire for additional children. This study also concludes that the presence of at least one son in a family decreases the probability of desiring more children by 44%. The probability of having additional children depends

on the number of previous children. Using the data from the 1970 Census in United States, Ben-Porath and Welch (1976) showed that families care about the gender of their children. For families having at least n children, the transitional probabilities, the probability of $n+1$ children, given n is significantly deferred within parity classes based on gender composition. In other words, the probability of having an additional child depends upon the number of boys in the first n children. They find that the U-shaped[1] transitional probability for white families holds when plans for following births are included. However, for black families, the transitional probabilities are not independent of the child's gender.

The effects of son preference by parents on child labour, schooling, bequests and welfare have been studied by Kumar (2011) by developing a model with bilateral altruism between parents and children. His study distinguishes between two cases, a pure son-preference case and pure-earning function bias towards males. In the son-preference case, both boys and girls receive equal amount of schooling when parents can give bequests. However, boys receive more schooling and work less than girls when parents cannot give bequests. This condition is also observed in the case of earning function bias, when parents cannot give bequests. In addition, boys will receive more or less schooling and work more or less than girls when parents cannot give bequests in case of earning function bias. Alternatively, in the son-preference case, time allocated to leisure for boys is higher than girls. Since data on bequests and reverse transfers are difficult to obtain in Bangladesh, this study only focussed on the time allocated to leisure by the boys and girls. Son preference leads to girls having a lesser amount of

[1] If there is some preference for a mixed sex composition, there is U-shaped relationship between the propensity to have more children and the proportion of boys in previous birth. This condition can be observed if there is a concern for the sex of children that generate higher fertility among those who are unlucky in the past, which can be interpreted as an expression of a taste for balance in the sex composition of children.

leisure than boys. In other words, girls should work more than boys. Therefore, using worked hours as the dependent variable, this study implemented the Tobit model on Bangladesh Multiple Indicator Cluster Survey (MICS) for 2005–2006 on children with the age of 5–14 years. The hypothesis of this study says that if there is a son preference; boys have more time for leisure compared to girls. The results show that, on average, boys worked 3.35 hours per week compared to 4.65 hours in the case of girls, which is significant at 1% level. The result supports the hypothesis, where boys work less hours than girls, which gives them more time for leisure compared to girls. Therefore, this result confirms that son preference is an important factor in explaining gender differential in child labour, especially in rural Bangladesh.

A large gender gap in housework among girls compared to boys is associated with the son preference in India. This has been studied by Lin and Adsera (2012), where son preference is measured by a mother's ideal proportion of sons among her children. To examine the relationship between son preference and the level of children's housework, this study uses the Ordinary Least Square (OLS) and random-effect models of hours of work of all children using the National Family Health Survey of India (NFHS-3) of 2005–2006. This chapter adopted a broader definition of child labour, which also includes housework, in assessing children's welfare which is influenced by different types of activities (see Canagarajah and Coulombe, 1997; Bhalotra and Heady, 2000; Khanam, 2006, Webbink, 2010). Studies by Edmonds (2006) and Basu et al. (2009) also include household chores in discussing the incidence of child labour. With the specification of son preference, family size, religion and caste, the results show an increase in girls' burden of household chores of around 2.5 hours per week compared to boys. In high-caste families, girls do 5.96 hours of housework, which is 2.3 hours higher than boys, but do less housework than the other families, where girls do an average of

7.51 hours of household work. In addition, an increase in the gender gap of housework is not significant among Muslim children. In terms of the rank of siblings, older children do more household chores than younger ones. However, in families of three and four children, the presence of a sister is associated with fewer hours of housework. Next, the study measures son preference with fertility intention to have another child when there is an equal number of boys and girls, which is driven by a desire for sons than daughters. On average, boys do 2.76 hours of housework if their mother does not intend to have a third child, and the period decreases to 2.63 hours if their mother does. However, the hours of doing housework for girls increases from 4.1 to 5.1 if the mother plans more children.

Gallego and Sepulveda (2007) address the issue of gender differences in educational attainment and work activities among children in Columbia. In particular, they investigate why poor girls have more educational attainment compared to boys, and as families relax their budget constraints, how it affects the variability of gender gap in education and work activities. Their study follows a basic theory framework of child labour of Baland and Robinson (2000) and Horowitz and Wang (2004), where they explain the entire gender gap in education by differences in wages and subjective ability towards schooling with perfect capital markets and without budget constraints. The empirical analysis utilizes data from *Familiasen Accion*, which is a social program that has been implemented in Colombia, where subsidies are given to poor rural families conditional upon school attendance of children aged 7 and above. By including the wage that the child earns in the labour market, the gender gap in schooling is reduced by 43%, which represents 40% of the raw gap. Furthermore, with the subjective desire towards schooling, (based on the questions "how much education the child would like to get" and "how much she would be able to get, if she has the chance") this element

decreases the gap by 55%, 50% of raw gap. These two effects show a direct substitutability between work and schooling, excluding domestic work.

Since girls in low-income households are at risk from such bias in household resource allocation, Koolwal (2007) investigates whether household fertility preference for sons and the mistreatment of girls can be reduced if they can generate income for the household. Son preference is defined by the household's average reported ideal number of sons relative to ideal number of children. This study uses the Nepal Living Standards Survey (NLSS) of 1995 and 1996, implementing OLS and Instrumental Variables (IV) estimates at both the household and community (ward) level. The IV estimates show that an increase in daily earnings of girls decreases demand for sons by 0.04 for children in the age of 10–15 years. For children with the age of 16–18 years, the reduction is 0.016, and the effect is much stronger for younger children. At the ward level, the girl's expected wage reduces the demand for sons by 0.05 for children with the age of 10–15 years; however, there is no significant effect on older children. The education of adult women shows a strong negative impact, however, men's schooling has no significant impact on the demand for sons. In addition, a household with large plot sizes of agricultural land has a higher demand for sons. Households in rural areas and access to piped drinking water negatively related to the demand for sons. She concludes that the upsurge in expected wages of girls of Indian Rupees, Rs. 20–25 (equivalent to USD 0.33-0.41) per day decreases the demand for a son.

The one-child policy and the differences in tradition of birth 'celebrations' and in privileges have strengthened the existence of son preference in China. A couple that already has a first child which is a boy is allowed to have a second child; however, they have to apply for a permit at a cost of about 4,000 yuan. The old Chinese tradition of male inheritance leads a couple to desire boys more than girls. Therefore, to prevent

them from violating the policy, the application of ultrasound gender determination equipment is widely used. Foetuses that were to be female were aborted, thus raising disparity in gender ratio in China. However, the technology is not free to use, and hence will deter the poor households from using it. Knight et al. (2008) examine the potential effect of son preference on household income of households in rural China. OLS and IV methods applied to Chinese Academy of Social Sciences (CASS) national household surveys which is restricted on the household in rural areas only, with the log of income as the dependent variable. This is to examine whether the households with more income are more likely to produce a son. Therefore, six dummy variables of two-child households' show that having either one or two sons increases income by 10% significantly compared to having a single daughter. This result is similar if the younger child is a son. By predicting the value of productive fixed assets and the number of hours spent in non-farm activities a significant positive coefficient is seen on the dummy variable of son rather than a daughter that indicates an incentive for households with sons to raise their income.

Based on the principles of Islamic inheritance in Indonesia, Carranza (2012) examines if the attempt to minimise the risk of inheritance expropriation arises by differences in son preference and fertility behaviour between Muslims and non-Muslims households. The central element of Islamic inheritance is that family wealth is transferred along the male line in the family. Therefore, Muslim couples who have daughters are more likely to face greater incentives for son preference. Implementing a difference-in-difference on the 2007 Indonesian Demographic Health Survey (DHS), the author compares Muslim and non-Muslim couples in which men have a surviving brother for the first difference relative to Muslim and non-Muslim couples who have no siblings or have only sisters (second difference), which is before and after the exclusion rights were extended to

daughters (third difference). She finds that son preference is not common among Muslim couples but limited to those who are expected to have a stronger motivation to seek a son. In case of Muslim couples, men with at least one surviving brother desire a 0.12 higher fraction of sons than similar non-Muslim couples before the change in the Islamic inheritance law. After the extension of inheritance exclusion rights to daughters, the desire for a son declined by 0.13. Therefore, the son preference and fertility of Muslim couples declined after the extended exclusion rights to daughters which gave them priority over the deceased male relatives. In addition, the results also indicate that there are no significant differences in the number of siblings in the household and the relative birth order of the boys and the girls. However, there is a strong significant decline in the proportion of the male children with upsurge in the number of siblings.

6.4 Theoretical Modelling

This section explained the theoretical modelling of son preference created by Haughton and Haughton (1998) model, and gender differentials in children's time allocation, proposed by Kumar (2011) based on the two-sided altruism of Baland and Robinson (2000) model.

6.4.1 Gender Preference

Following Haughton and Haughton (1998), son preference is assumed to occur when, for any given number of sons and daughters, a family prefers an additional son to an additional daughter, which is defined by sequential preferences. Defining $V(S, D)$ as the

utility which parents get from having S sons and D daughters, then sequential son preference implies that:

$$V(S+1, D^*) - V(S, D^*) > V(S^*, D+1) - V(S^*, D) \quad (6.1)$$

for at least some values of S^*, D^*, S and D. Equation (6.1) implies that the utility of one or more son exceeds the utility of one more daughter. In the case of strict sequential son preference, this equation holds for all values of S^*, D^*, S and D, that is, no matter how many sons and daughters there are. Sequential son preference means that parents make a series of decisions about childbearing, and at some of the steps, they have a distinct preference for a son.

McClelland (1979) argues that the utility function may be separated in two components, given by:

$$V(S, D) = U(S + D) + W(S - D) \quad (6.2)$$

We may interpret $U(S + D)$ as the preference for a particular number of children, and $W(S - D)$ as gender preference. For parents with no gender preference, $W(S - D) = 0$ for all S, D where, fertility decisions are not risky, and family size preference predominates. If son preference predominates, more sons will increase $W(S - D)$ and then raise utility, while more daughters will lower $W(S - D)$ and leave the household worse-off, for any given number of children. Therefore, parents must balance their preferences for a certain family size with their gender preferences. They will plan to have another child if:

$$\hat{p}_S . V(S+1, D) + \hat{p}_D . V(S+1, D) > V(S, D) \quad (6.3)$$

where $\hat{p}_S$ and $\hat{p}_D$ are the (subjective probabilities of having a son or daughter respectively, and sum to one. Equation (6.3) indicates that the expected utility of having an additional son plus the expected utility of having an additional daughter should leave the parents better off than if they had another child. Two important corollaries need to be considered. First, we cannot infer individual preferences simply by observing individual behaviour, because we have no independent measure of risk. For example, if a couple stops childbearing when they have two, is it because they have reached their ideal family size or are they practising son preference, but is fearful of giving birth to a girl? In the former case, the gender decision dominated by the size decision. However, the situation is complicated because the unobserved subjective probabilities of giving birth to a boy or a girl often differ sharply from the objective probabilities (McClelland, 1979). Second corollary is the fact that we cannot infer individual preferences by observing group behaviour. This is because preferences may be heterogeneous, so that $W_i(S-D) \neq W_j(S-D)$ for any household i, j. If half of all households prefer sons and half prefer daughters to an equal degree, then it may be impossible to find behavioural evidence of gender preference, even though such preference may exist and be strong.

6.4.2 Gender Differentials in Children's Time Allocation

Based on two-sided altruism of Baland and Robinson (2000), there are two periods in the model, $t = 1,2$ and parents are treated as a single decision-making and consumption unit. The economy consists of a large number of households and firms and each household consists of parents and two children. Parents and children live for both periods. Parents work and supply labour in elastically and parent is assumed to have an

efficiency units of labour in each period. Firms[2] are owned by other type of agents, who live for two periods and do not have children. In the first period, children are endowed with one unit of time, which can be spent as work, schooling and leisure. Children incur disutility from both schooling and work, and parents face a direct trade-off between schooling and child labour (Baland and Robinson, 2000; Horowitz and Wang, 2004). Schooling in the first period raises the labour endowment of children in terms of earnings in the next period.

Let labour supplied by boys and girls be defined by l^m and l^f, respectively (Kumar, 2011). Human capital acquired by ith child of next period is assumed to depend on the time spent on schooling, s^i. The human capital function, $h^i(s^i)$ for $i = m, f$ is assumed to be strictly increasing, homogeneous of degree one and concave function of s^i. In addition, assume that $h^i(0) > 0$ (Kumar, 2011; p. 5). Both children and parents are altruistic. Parental utility depends on the parents' own consumption and utility levels of children. Though parents care about both of their children, they may prefer boys over girls. Therefore, the parental utility function is:

$$W^p = U(c_p^1) + U(c_p^2) + \delta^m W^m + \delta^f W^f \tag{6.4}$$

Where, $U(\,)$[3] is the period utility function, c_p^t, the consumption by parents in both periods, parameters $0 < \delta^i < 1$ for $i = m, f$, measure the degree of altruism, and W^m and W^f are utility functions of the boys and girls, respectively, which are defined as:

$$W^m = U(c^m) + V(1 - l^m - s^m) + \gamma W^p \tag{6.5}$$

[2]Firms are assumed to produce goods using labour (which is hired in a competitive labour market) and have linear technology (Kumar, 2011).Therefore, wages per efficiency unit of labour are constant, which are normalized to 1.

[3]$U(\,)$ is a twice continuously differentiable, strictly increasing, and concave function of consumption (Kumar, 2011).

$$W^f = U(c^f) + V(1 - l^f - s^f) + \gamma W^p \quad (6.6)$$

Where $V(1 - l^i - s^i)$ is an increasing and concave function of leisure$(1 - l^i - s^i)$. γ is the degree of altruism by children towards their parents. Combining (6.4), (6.5) and (6.6) the expression for W^i for $i = p, m, f$ is:

$$W^p = \frac{\sum_{t=1}^{2} U(c_t^p) + \sum_{i=m,f} \delta^i [U(c^i) + V(1 - l^i - s^i)]}{1 - \gamma(\delta^m + \delta^f)} \quad (6.7)$$

$$W^m = \frac{(1 - \gamma\delta^f)[U(c^m) + V(1 - l^m - s^m)] + \gamma[\sum_{t=1}^{2} U(c_t^p) + \delta^f [U(c^f) + V(1 - l^f - s^f)]]}{1 - \gamma(\delta^m + \delta^f)} \quad (6.8)$$

$$W^f = \frac{(1 - \gamma\delta^m)[U(c^f) + V(1 - l^f - s^f)] + \gamma[\sum_{t=1}^{2} U(c_t^p) + \delta^m [U(c^m) + V(1 - l^m - s^m)]]}{1 - \gamma(\delta^m + \delta^f)} \quad (6.9)$$

For well-defined utility functions to exist, a condition that parameter values of $1 > \gamma(\delta^m + \delta^f)$ will be imposed. Parents choose their consumption for both periods including savings, child labour, and time spent in schooling and bequests for both children. The rate of return on savings is normalized to one. Further, in the second period, parents give bequests, $b^i \geq 0$ for $i = m, f$ to their children. In return, children also give transfers, $\tau^i \geq 0; i = m, f$, to their parents in the second period of their lives. By letting k be the savings in the first period, the budget constraints faced by both parents and children will be:

$$c_1^p + k = A + l^m + l^f \quad (6.10)$$

$$c_2^p + b^m + b^f = A + k + \tau^m + \tau^f \quad (6.11)$$

$$c^m = b^m - \tau^m + h^m(s^m) \quad (6.12)$$

$$c^f = b^f - \tau^f + h^f(s^f) \quad (6.13)$$

The choice of τ^i is conditioned on all previous choices by parents, and parents consider the way where transfers are affected by their own choices in maximizing Equation (6.7). We can consequently solve for the equilibrium allocation of resources by solving for the optimal choice of τ^i conditional on l_i, k and b. This satisfies the first-order condition:

$$V'\left(h^i(s^i)\right) + b^i - \tau^i = \gamma U'(A - b^i + k + \tau^i) \tag{6.14}$$

In making their initial choices, parents anticipate the effects on the transfer they get from their child. A positive transfer from child to parent is like a negative bequest. In our case, we focus on the transfer from parents to children.

Parents to Children Transfer

With the transfer from parents to children, $b^i > 0, \tau^i = 0$, for $i = m, f$, the parental optimization problem is:

$$\max_{c_1^p, c_2^p, l^m, l^f, s^m, s^f, b^m, b^f, k} \frac{\sum_{t=1}^{2} U(c_t^p) + \sum_{i=m,f} \delta^i [U(c^i) + V(1 - l^i - s^i)]}{1 - \gamma(\delta^m + \delta^f)} \tag{6.15}$$

subject to the budget constraints of Equation (6.6) to (6.14). With the interior solution for child labour of $0 < l^m, l^f < 1$, the first-order conditions associated with the optimal choices, are:

$$l^i: U_c(c_1^p) = -\delta^i V_l(1 - l^i - s^i), for\ i = m, f. \tag{6.16}$$

The left-hand side is the marginal benefit of child labour and the right-hand side is the marginal cost. In the first period, parental utility is increased by $U_c(c_1^p)$ by one additional unit of child labour; however, it decreases the utility enjoyed by the ith child by $-\delta^i V_l(1 - l^i - s^i)$.

$$s^i: U_c(c^i) h_s^i(s^i) = -V_s(1 - l^i - s^i), if\ s^i > 0, for\ i = m, f. \tag{6.17}$$

Equation (6.14) defines the marginal cost of the time spent in schooling to its marginal benefits. The earnings of child increases in the next period as the schooling time is increased by $h_s^i(s^i)$. The utility enjoyed by the ith child also reduces by $-\delta^i V_s(1 - l^i - s^i)$. Equation (6.15) equates the marginal cost of time spent in schooling exceeds its marginal benefit, which is denoted by following equations:

$$s^i: U_c(c^i)h_s^i(s^i) < -V_s(1 - l^i - s^i), if\ s^i = 0, for\ i = m, f \tag{6.18}$$

$$b^i: U_c(c_2^p) = \delta^i U_c(c^i), if\ b^i > 0, for\ i = m, f \tag{6.19}$$

$$b^i: U_c(c_2^p) > \delta^i U_c(c^i), if\ b^i > 0, for\ i = m, f \tag{6.20}$$

$$k: U_c(c_1^p) = U_c(c_2^p). \tag{6.21}$$

The left-hand side of Equation (6.16) is the marginal cost of giving bequest to child, i, and the right-hand side is the marginal benefit. Utility of parents is reduced by $U_c(c_2^p)$ with an additional unit of bequest in the second period. At the same time, the utility of parents is increased by $\delta^i U_c(c^i)$. Parents will not give any bequest to the ith child if the marginal cost of bequest to the ith child exceeds marginal benefit, which is shown by Equation (6.20). The marginal cost of savings[4] is denoted by the left-hand side of Equation (6.21) with its marginal benefit (right-hand side). Income increases by one unit in the next period as savings increase by one unit, with the value of $U_c(c_2^p)$. Equation (6.15) implies that:

$$\delta^m V_l(1 - l^m - s^m) = \delta^f V_l(1 - l^f - s^f). \tag{6.22}$$

[4]The marginal cost of savings is the loss in the utility by having to consume one unit less in the first period.

Son preference ($\delta^m > \delta^f$) leads to boys having higher amount of leisure than girls and $l^m + s^m > l^f + s^f$, which is tested in the analysis. Both boys and girls have the same amount of leisure in the absence of son preference, which is, $l^m + s^m = l^f + s^f$.

6.5 Data and Dependent Variable

The data are drawn from the Indonesian Family Life Survey (IFLS4), a continuing longitudinal socioeconomic and health survey, which provides data on households and communities in Indonesia. The first wave (IFLS1) was conducted in 1993/1994 by Rand Corporation in collaboration with other organizations covering 83% representatives of the Indonesian population living in 13 out of the 27 provinces in Indonesia. Small provinces and politically unstable provinces such as Irian Jaya at that time were not sampled. Households were randomly selected in 321 enumeration areas in all provinces, after urban and rural areas were stratified. Different members in the households were interviewed according to various selection criteria to ensure sufficient numbers of older respondents. This was followed by IFLS2 and IFLS2+ (1997/1998) and IFLS3 (2000). The latest wave, IFLS4, was released by mid-July 2009. The fieldwork took place in late 2007 and early 2008 on the same 1993 households and split-offs, and 7,224 households were interviewed, and detailed individual-level data were collected from over 22,000 individuals, which will be utilized for this study. We use the last wave of the survey, the IFLS4 because IFLS4 offers the richest set of data (questionnaires are updated after each wave) and for this reason it is at the moment the only wave we use in our analysis. In particular, IFLS4 contains new data on religiosity (used in our analysis) which is not available in previous rounds. In addition, in the fourth wave, the respondents were scattered in 21 provinces in Indonesia, compared to 13 provinces in

the previous survey. The main reason IFLS were chosen is that SUSENAS do not have complete information on married women and children hours worked inside and outside of the home. In particular, questions in questionnaire only covers the age at marriage, number of living children, number of children that has died and the type of contraceptive that they ever used. In addition, there is no particular question of maternal history (includes the desire for future birth) which is required to do the analysis. Furthermore, to test the gender differentials in children's time allocation, instead of hours of worked outside the home, hours of worked inside the home and hours spent in school are also needed, which is only provided in IFLS survey.

6.5.1 Data on Married Women

All ever-married women aged 15-49 years were asked about their retrospective life histories on marriage, children ever born, pregnancy outcomes and health-related behaviour during pregnancy and childbirth, infant feeding practice, and contraceptive use.

Table 6-1: Maternal and Household Characteristics, Indonesia 2007

Characteristics	**All Married Mothers**
Maternal age at first marriage (years)	20.4
Maternal age at time of survey (years)	34.7
Households in urban areas (percent)	53.7
Households with male head (percent)	82.8
Mother's level of formal education (years)	9.5
Father's level of formal education (years)	8.9
Surviving children (mean)	3.5
Surviving sons (mean)	1.9
Households with no sons (percent)	31.2
Households with no daughters (percent)	34.4
Household income (IDR per year)	22,000,000
Mothers breastfeeding (percent)	96.3
Couples using contraceptives (percent)	80.8
Married mothers, aged 15-49 years (N)	**6,135**

Sources:IFLS4, 2007.

From this group, this chapter focuses attention of ever-married woman with at least one child. Therefore, this selection provided a sample of 6,135 women. Some basic background data on the mothers surveyed is given in Table 6-1. From Table 6-1, the mean age at marriage is at 20.4. About 53 percent of all households reside in urban area, and 82.8 percent are headed by a man, where headship is as defined by the respondent. Women have completed almost 10 years of education, while men have finished an average of 9 years. In addition, about 31.2% of households reported that they have not had a son and 34.4% of households report of not having a daughter. Household income is approximately US$1,878 per year. Furthermore, the contraceptive use is high, reported by 80.8 percent of married women aged 15-49 years, although most of them are using traditional method (traditional herb).The dependent variable is desired for future birth' which takes value of 1 if the respondents replied affirmatively and, 0 otherwise. The two measures of 'desire for future birth' are based on the questions:

i) *Do you personally wish to have another child besides the children you already have and how many children do you wish to have?(Yes or No)*

In cases where the respondents did not want additional children, the existing number of children was considered as their desired number. Therefore, we restricted our analysis to women who provided numeric answers to the questions. Table 6-2 gives the percentage of married women who desired to have future birth according to the number of living children.

Table 6-2: Percentage of Married Women With the Number of Living Children in each Age Group Who are Desire for Future Birth, 2007

Age Group (years)	Number of Living Children						Number of Women
	0	1	2	3	4	5+	
All							
<25	0.0	72.8	19.0	4.7	2.1	1.3	**1,898**
25-34	0.0	55.5	31.9	10.0	1.7	0.9	**2,686**
35-44	3.8	52.1	29.3	12.2	1.9	0.8	**563**
45+	15.4	84.6	0.0	0.0	0.0	0.0	**53**
Urban							
<25	0.0	75.7	15.7	5.2	1.9	1.4	**844**
25-34	0.0	58.3	31.0	8.4	1.2	1.1	**1,185**
35-44	3.6	51.8	29.5	12.2	1.4	1.4	**439**
45+	16.7	83.3	0.0	0.0	0.0	0.0	**24**
Rural							
<25	0.0	70.9	21.3	4.3	2.2	1.3	**954**
25-34	0.1	52.4	32.8	11.7	2.1	0.7	**1,601**
35-44	0.4	52.4	29.0	12.1	2.4	0.0	**124**
45+	14.3	85.7	0.0	0.0	0.0	0.0	**29**

Source:IFLS4, 2007

Table 6-2 clearly shows that women who have one living children are more likely to have future birth. The percentage decreases as the women get older. The age plays a role in female fertility, where the older the women, the lower her chance of pregnancy. In addition, women with the age of 35-44 years who do not have a child, wish to have a child and the proportion increase as the women aged 45 years and above. However, the percentage is higher if the women have 1 child. The desire to have a child was stopped when the women with the age of 45 years and above have 2 living children. The reason may be due to the presence a son, or due to the age factor that could affect their pregnancy at the later age. Furthermore, only 1.3% of women aged less than 25 years who have 5 or more living children still have a wish for childbearing. In particular, women in urban areas are more likely to have next childbearing compared to the women in rural areas in all age groups.

Table 6A-1 in Appendix 6A gives the proportion of women aged 15-49 years according to their 'desire' additional number of sons on the total numbers of children that they wish to have. In total, 70% of women with at least one son desire to have another son, and the proportion decreases as women had two or more sons in a family. In terms of women's age, the proportion of Indonesian women who wanted more children increased at the age of 25-34 years. This is true since the most fertile age for women is between the age of 23 and 31. However, a small proportion is observed at the age of 35 and above. The reason may be due the sign of pre-menopause or the low probability to conceive since fertility rate decreases as age of women increases. Almost 58% of women, who wish to have future birth, wish to have a son. The proportion also increases among women who are desired to have two more children. It is interesting that among 3 children that women wish to have, almost 90 percent of them wish to have 1 more son and 71 percent of them want to have 2 more sons. The region-divide shows that women in urban areas are more likely to have a desire for a son as opposed to their counterparts in rural areas. This is particularly true since the proportions of them who are wishing to have a future son are higher than the proportions that do not wish to have a son. In addition, it is clearly shown that there are high proportions of women who want three and more children, wish to have all sons. This is shown by women aged 25-34 years in urban (58 percent) and rural areas (62 percent). This result reflects the existence of son preference among ever-married women, since the women in the range of aged 25-34 years are considered in high fertility group.

6.5.2 Data on Children

The survey collects data on individual respondents, their families, their households, the communities in which they live, and the health and education facilities they use. In particular, the survey also provides detailed information on the employment activities and schooling of children with the age of 5–17 years. For children younger than 11 years, the child's mother, female guardian, or caretaker answered the questions. Children between the ages of 11 and 14 years were allowed to respond for themselves if they felt comfortable doing so. However, for children with the age of 15 years and above, they are interviewed individually. The allocation of time includes hours spent in employment activities, in school and do housework. In particular, the spent hours on employment activity includes hours spent on 'working' in the family farm, non-farm business as well as working for outsiders. In hypothesis testing, girls have less leisure than boys, instead of hours devoted on working, the hours spent doing household chores and hours spent in school also included, since working, do housework and attend school are considered as non-leisure activity.

The sample consists of 9,461 children with the age of 5–14 years with 4,843 boys and 4,612 girls. In addition, since this study covers children below 18 years, this chapter also includes 2,502 children with the age of 15–17 years with 1,232 boys and 1,270 girls. Thus, in total, the sample consists of 11,963 children. For these two sets of children, this chapter will investigate if there is a son preference as captured by evidence that girls have less leisure than boys, all else being constant. In other words, boys will have more leisure than girls. According to Rosati and Rossi (2007), the number of hours spent on working is not only important in itself as a measure of child welfare (measure of forgone leisure), but it is also an essential ingredient to evaluate the

cost of work in terms of health and human capital accumulation. Thus, we utilize the spent hours in each activity as the dependent variable of the analysis.

Children with the age of 5-14 years are among those young people who are expected to be in school, while children with the age of 15-17 years are the age after the completion of basic schooling, which work becomes legal and further schooling is an optional. Thus, time allocation for children with the age of 5-14 years and 15-17 years may vary depending on several factors. In addition, Table 6-3 provides summary statistics of total number of hours per week spent in school, in housework and in working children aged 5-14 years.

Table 6-3: Children's Total Number of Hours Spent per week on Schooling, Housework and Working for Children Aged 5-14 years, 2007.

Gender	**Total Number of Hours (per week)**		
	Attending School	Housework	Working
Pooled	19.91	5.58	11.44
Boys	19.80	4.93	10.97
Girls	20.08	5.97	11.99

Source: IFLS4, 2007

As shown in Table 6-3, the hours spent on working of the girls aged 5-14 years (11.97 hours per week) are much higher than that of boys (10.97 hours per week). Girls also spent more hours on doing housework than boys with the gap of 1.07 hours per week. Even though girls are more likely than boys to be in the labour market and doing housework, they spent more time on schooling compared to boys with an average of 20.08 hours per week.

Table 6-4: Children's Total Number of Hours Spent per week on Schooling and Working for Children Aged 15-17 years, 2007.

Gender	**Total Number of Hours (per week)**	
	Attending School	Working
Pooled	23.76	42.76
Boys	22.93	48.15
Girls	24.62	40.56

Source: IFLS4, 2007

Table 6-4 displays the total number of hours of children aged 15-17 years, which is spent on schooling and on working. There is no information on hours spent on do housework for children aged 15-17 years provided in IFLS4. Therefore, only the hours spent on schooling and on the labour market are reported here. Older girls also spent most of their time on schooling with an average of 24.62 hours per week, which are 1.69 hours more than boys. In contrast, boys spent more than 40 hours in the labour market with the gap of 7.59 hours relative to girls. In total, it is clearly shown that older children are more likely to spent their time in the labour market than younger children, while girls are more likely to attend school and do housework compared to boys.

6.6 Explanatory Variables

6.6.1 Gender Preference (Desire for Additional Child)

Since women's attitudes and behaviours is a priority here regarding gender preference, only maternal variables are used in order to investigate the effects. Thus, the main effects (independent variables) relatives to women, which are used here are the presence of a son, women's age at marriage and her education. Since son preference is the interest here, a dummy variable is included to indicate whether the family already has a son. Thus, the presence of sons is measured as a dummy variable, value 1 if the respondent had at least one son, and 0 otherwise. It is expected that the desire for future births would be explained better by the presence of sons rather than their number.

A measure of the mother's age at marriage is included since the fact that fertility rate first rises, then falls with the age of the mother. Therefore, we set a dummy variable to represent the groups of age: less than 15 years, 15-18 years, 19 years and above. Women with higher levels of education are expected to be less likely to have large

families than women with lower levels of education (Ali, 1989). One possible reason is more education may be related to a greater ability to practice family planning method. In addition, better educated women are expected to have small households because higher education resulted in increased opportunities for women to work outside of home (Shirahase, 2000). Thus, a set of dummy variables, such as no education, primary, secondary and above is included in the analysis. In addition, when assessing data using Multiple Classification Analysis (MCA), adding covariates can greatly improve the accuracy of the model and may significantly affects the final analysis results. A covariate is any continuous variable, which is control variable. In particular, regarding women's desire for future birth and the number of children they additionally wanted to have been made by keeping in consideration their existing number of children in a family, where the existing number of children is the outcome of children ever born and the number of children who had died. In addition, the desire for future birth is also found to be closely linked with the age of the women. Thus, the covariates included in the analysis are number of living children, number of children who had died and women's age.

6.6.2 Gender Differentials in Children's Time Allocation

Independent variables used in this chapter include child characteristics, household-specific characteristics and regional characteristics, which are based on the existing literature and are widely used. For child characteristics: gender, the child's age and age-squared are the variables used in the regression. A dummy variable of girls is included as this variable will be the reference for the hypothesis, which takes value 1 if child is a girl and 0 otherwise. In particular, a positive sign of coefficient showing that girls have

more non-leisure's time allocation than boys, and vice versa. This indicates that girls have less leisure than boys which supports the hypothesis. As shown in the previous chapter, older children are more likely to go to work than younger children (Priyambada et al, 2005; Kamga, 2010; Rosati and Rossi, 2007). The age-squared variable captures possible non-linearity in the effect of age as the children get older. Hence, if the age-squared has negative effect, that means that as children get older, the effect of age is reduced (Ray and Lancaster, 2003). There is evidence of parental altruism towards their own children. Therefore, the dummy variable of others (the relationship with the head of the household) is included to capture the differences in preferences in the household. The dummy variable takes a value of 0 if a child is a son and a daughter of the household head and 1for others. This variable is expected to have a positive association with housework, and negative association with doing house work and working.

Household characteristics include education level of father and mother. This variable may reflect their relative bargaining power in the household decision making. Previous literature has argued that fathers have a greater say on the decisions about their sons and mothers have a greater say on the decisions of their daughters. Further, both variables may have differential effects on children's time allocation (Parikh and Sadoulet, 2005). The availability of father and mother at home is included as explanatory variables as the role of both adult men and women is different in the household. In most developing countries, women are found to work inside the home or as homemakers, and men are breadwinners and work outside the home. These gender differences in the activities may also get reflected in the division of labour among the boys and the girls. In particular, if the father does not stay at home, boys will take turns to be breadwinners to the family by working outside their home. Otherwise, if mother does not stay at home, the girls

will take up her roles and responsibilities. Therefore, these variables are tested to examine whether it has a differential effects on the boys' and girls' child labour.

Other household characteristics which are included in the model are the household income, the household size, and the number of children aged below 5 in the household. IFLS data provides information on the individual earnings of each household member who is reported to be working in the survey week. Since paid child labour raises household income, children's income is not taken into account in computing the total of household income to avoid aggregation bias. A higher household income is expected to have a negative impact on working and doing housework (Grootaert, 1998; Cockburn, 2001; Rogers and Swinnerton, 2003). In contrast, increase in household income is estimated to positively relate to hours of schooling. The household size replicates the available pool of family labour and affects the incentives for the family either to put the children to work or not. This variable is expected to have a negative effect on working (Bhalotra and Heady, 2001; Guarcello et al, 2004; Jeong, 2005; Togunde and Richardson, 2006). In addition, the presence of children under 5 in the household needs child care that might increase the responsibility of mother which reduces her availability for other activities. Therefore, this is likely to be the factor that increases the demand for working children (Carvalho-Filho, 2008). According to Rosati and Rossi (2002), the presence of preschool-age children reduces the enrolment probability of children, and has the opposite effect on the hours spent on housework and working.

In Indonesia, over 40 million people lack access to improved water source and this condition remains a serious challenge to the provincial government level, especially in slums and rural areas[5]. Therefore, fetching water remains the most important household

[5]The World Bank (2014). "Indonesia: World Bank Group President Flags Sanitation As Key Priority for Ending Poverty". Retrieved January 8, 2014 from

chore in rural areas. To reduce the hours spent on working and doing household chores, the presence of clean drinking water source is greatly needed (Guarcello et al., 2004). Hence, the dummy variable for the households that receive piped water takes value of 1, and 0 otherwise. To capture the effect of the cultural and social norms on child labour, the dummy variable of religion is included. Since 88.2% of the people in Indonesia are Muslims, this variable takes the value of 1 if the religion is Muslim, and 0 otherwise (see also Canagarajah and Coulombe, 1997; Krolikowski, 2007). Apart from the child and household characteristics, dummies for the region are also included in the model, where Indonesia is divided into five islands[6]: Sumatera, Java, Lesser Sunda Islands, Kalimantan, and Sulawesi. Sulawesi is treated as the base. Table 6B-1– to Table 6B-3 in Appendix 6B show summary statistics of the explanatory variables for both boys and girls.

Descriptive Statistics

In total, the mean age of all children is 10.62, and children have attained on average 6 years of schooling (Table 6B-1). Girls obtained higher years of schooling compared to boys in both groups of age. Almost 27% of children in the sample are considered as other relatives who are not a son and a daughter, to the head of the household. The proportion is higher among girls as opposed to boys for both younger and older children. About 90% of mother stays at home, while 97% of father stays at home in 2007. On average, fathers have obtained 7.9 years of education and mothers have attained 7.7 years of schooling, and the higher years of schooling obtained is among younger children compared to older children. In addition, household income are IDR

http://www.worldbank.org/en/news/press-release/2014/04/11/indonesia-world-bank-group-president-flags-sanitation-as-key-priority-for-ending-poverty

[6]IFLS only covers five islands during the survey. Therefore, instead of seven islands in Indonesia, only five are dealt with in this chapter. The two islands that are not covered during survey are Maluku and New Guinea.

19,080,500 (equivalent to USD$1,598) per month, on average, where the amount is higher in boys' households. The households on average consist of 6.7 household members, where 44% of households having children aged less than 5 years in the household. Approximately, 22% of households have a pipe in the household to access water, and 90% of households are Muslims. Most of respondents are living in Sumatera with the percentage more than 50%, and the lowest respondent are located in Sulawesi with the percentages of 6%.

Table 6B-2 and Table 6B-3 present the summary statistics according to the activity reported by children in the previous week. The older working children on average attained 11.91 years of schooling, and 27% of them are other relatives to the head of the household. The percentage is less compared to working children aged 5-14 years. The father and mother are likely to stay at home among working children aged 15-17 years as opposed to children aged 5-14 years. In addition, better educated parents are among older children, with an average of 7.4 years of fathers and 7.09 years of mothers, while parents of working children aged 5-14 years has attained 6.7 years of fathers and 6.57 years of mothers, in average. The size of households approximately 7.0 of working children aged 5-14 years, while almost 6.5 in the households of working children aged 15-17 years. The proportion households having access to piped water and the proportion of Muslims does not have a large difference between working children aged 5-14 years and 15-17 years. Working children are mostly located in Java Islands, where the proportion is more than 35% for both groups of age, while the lowest proportion of them are living in Kalimantan Islands with a proportion of 3% and 4% of working children aged 5-14 years and 15-17 years, respectively.

It is clearly shown in Table 6B-2 (column 2), almost 63% of girls do the housework. On average, age of child involved in housework is at 10.73 years. The years of schooling

attained are lower than children in working category, with on average of 6.70 years. Fathers had attained 7.70 years, while mothers had attained 7.58 years of schooling. On average, household income among children in housework category is Indonesian Rupiah, IDR 1707.35 per month. In addition, 21% of households have piped water in the household, where 90% of the households are Muslim.

For schooling activity, girls are more likely to be in school category than boys, with the proportion of 51% for both younger and older children. On average, a child aged 5-14 years in schooling category is at 9.99 years and a child aged 15-17 years at 15.99 years. More than 85% of fathers and mothers stay at home, and fathers of younger had attained 8.06 years of schooling. However, mothers of younger children had attained 7.85 years of schooling. For children aged 15-17, fathers had achieved 7.44 years, while mothers had achieved 7.09 years of schooling. In addition, household income is higher than those in working and house work category.

6.7 Methodology

The methodology presented here are Multiple Classification Analysis (MCA) to examine the gender preference of ever-married women, tobit model to analyse the gender differentials in children's time allocation. Finally, the decomposition analysis is used to examine the extent to which the factors or independents influence the time allocation among children.

6.7.1 Multiple Classification Analysis (MCA)

In order to examine the relative importance of each independent variable on the desire for future birth, multivariate analysis was employed, by controlling the covariates. Multiple Classification Analysis (MCA) is one of the commonly used techniques employed to examine the contribution of each category of the predetermined predictor variables before and after adjustment for the controlling variables. In other words, it is an ordinary linear multivariate regression model consisting of the nominal variables as dummies, for analysing interrelationships between several predictor variables and a dependent variable within the context of an additive model. The predictors in an MCA can be measured either in ordinal or nominal scale, and the dependent variable has to be either in interval scale or in dichotomous category. According to Ali (1989), MCA techniques look at the relationships between several predictor variables and a dependent variable.

MCA controls simultaneously a number of variables within the framework for an additive model fitted by the method of least squares that can be used for displaying the results of the analysis of variance where significant interaction effects are absent. Therefore, to study the relationship between the selected independent variables and the dependent variables, the women's age (at the time of interview), the number of her living children, and the number of children who died were taken as the covariates. The women's education, women's age at marriage and the number of her living sons were taken as the main independent variables (also called as main effects). A similar approach has been used by Das (1987), Regassa (2007) and Varma and Babu (2007).

Thus, in order to measure the net effect of each predictor on the dependent variable desire for future births, let Y_{ijlw} denotes the individual desire on the next birth to W^{th}

women belonging to the i^{th} category of the variable 'age', j^{th} category of the variable 'women education', and l^{th} category of the variable 'the presence of son'. Then, the model can be expressed in simple terms, as:

$$Y_{ijlw} = \ddot{U} + a_i + b_j + c_l + e_{ijlw} \tag{6.23}$$

where; $\ddot{U}$ = general effect, a_i = effects of the i^{th} category of the variable age, b_j = effects of the j^{th} category of the variable women education, c_l = effects of the l^{th} category of the variable of the preference of son, and e_{ijlw} = residual terms not accounted for by the variables taken in the model. Let:

$$\ddot{\emptyset} = \ddot{U} + a + b + c \tag{6.24}$$

$$Y_{ijlw} - \emptyset = (a_i - a) + (b_j - b) + (c_l - c) + e_{ijlw} \tag{6.25}$$

The MCA procedure provides figure and estimates for each predictor. It provides estimates of the "unadjusted" and "adjusted" effects of each of the independent variable on the response variable. For example, the unadjusted effect (deviation) of a particular category of a (a_1 for example) is equal to mean value of Y among those belonging to category 1 of a minus overall mean of Y values of 1. This illustrates the extent to which values among women of first category of A differ from the overall mean value of Y. However, this does not reflect the effect since the distribution of women according to the levels in other predictors may be different for women belonging to category 1of a.

The MCA table also provides Eta values which indicate the ability of a predictor, using the categories given, to explain variations in the dependent variable $Beta$, which are directly analogous to the Eta statistics, that are based on the adjusted means rather than the raw means, provide a measure of the ability of the predictor to explain variation in

the dependent variable after adjusting for the effects of all other predictors. Multiple correlation coefficient squared, R^2: unadjusted for degree of freedom indicates the proportion of variance explained by the whole model, while R^2: adjusted for degree of freedom specifying the proportion of variance in the dependent variable explained by all predictors (Regassa, 2007).

6.7.2 Gender Differentials in Children's Time Allocation (Tobit Model)

To examine the relative significance of the two types of gender bias, the following regression model is estimated. We consider a Tobit model for child labour supply in order to take into account the nature of our dependent variable of total hours of work, which the distribution is censored from below at zero due to non-participation in either the market or domestic work. Since the hypothesis tested is boys have more leisure time compared to girls in prevalence of son preference, thus the total hours of work includes hours spent at school, work and do housework. The analysis estimates for boys and girls, separately for children aged 5-14 years and 15-17 years. According to Basilio (2009) and Kumar (2011), hours worked could be described as a response variable that includes the value zero with positive probability but is a continuous variable over strictly positive value. Therefore, following Basilio (2009), the Tobit model is written as:

$$H_i = \alpha_{ij} + \beta_{ij}X_{ij} + \varepsilon_{ij} \quad for \quad i = m, f \; and \; j = 1,2 \tag{6.26}$$

where, H_i is the vector of the number of hours worked in a week by child i in group j (two groups: 5-14 years and 15-17 years), α is the estimated constant term, X,represent gender explanatory variables and β, the associated coefficient vector. In addition, ε is

the error term which is assumed to be normally distributed. Theoretical model suggests explanatory variables will have different effects for boys and girls so we estimate the function, separately by gender. Moreover, Equation (6.26) is estimated separately for children aged 5–14 and 15–17 years to investigate the differential effects of the explanatory variables based on age of the children since the time spent in working and schooling are different between two groups of age (which is found in Chapter 4, where younger children tend to go to school more than older children). It is inevitable that children may not participate in any activity, or their parents did not report the hours spent to work, school and housework. In addition, children may be 'idle' or do not do anything, which consequently, the dependent variables have a zero value. Since there are reported number of hours is zero the data are censored at zero, thus a censored regression of tobit model is estimated to estimate Equation (6.23) which expresses level of y in terms of an underlying latent variable, y^*:

$$y_i^* = \beta_0 + \beta_1 x X_i + \varepsilon_i$$

$$y_i = \begin{cases} \beta_0 + \beta_1 x X_i + \varepsilon_i & if\ y_i^* > 0 \\ 0 & if\ y_i^* \leq 0 \end{cases} \tag{6.27}$$

The tobit model is used for this analysis because the data includes zero values of dependent variable, and the observed zero values are not due to the decision of individual households, but due to censoring. Equation (6.27) indicates that the observed number of hours is positive continuous for positive number of hours desired. Therefore, since the non-negative values of hours worked, dependent variable Y_i is censored at zero. This model is nonlinear and thus, it is estimated using maximum likelihood estimation techniques. The likelihood function for the tobit model takes the form

$$lnL = \sum_0 \ln[1 - \emptyset(\frac{x_i\beta_i}{\sigma})] + \sum_+ \ln[\frac{1}{\sigma}\varphi\left(\frac{Y_i - x_i\beta_i}{\sigma}\right)] \tag{6.28}$$

where, "0" implies the zero observations (hours worked Y_i is zero) in the sample and "+" implies the positive observations (hours worked Y_i is positive). $\emptyset(.)$ and $\varphi(.)$ indicate standard cumulative distribution function and standard normal probability density function, respectively. Estimated coefficients from the tobit model is not directly interpreted. It is a bit more complex than interpreting estimated coefficients from the OLS model. Specifically, the estimated coefficients represent the marginal effect of x on y. Thus, the estimated coefficients from the tobit model represent: $\frac{\partial E[y_i^*|x]}{\partial x_i} = \beta$ and thus correspond to the marginal effect of x on the latent variable y^* not to be observed variable y. Sometimes y^* is what is of interest but usually it is not. What is really wanted is the marginal effect of x on y. Therefore, the expected value of y conditional on y being greater than zero, which is given by:

$$E[y_i|y_i > 0] = \beta_0 + \beta_1 X_i + \sigma\left[\frac{\emptyset(\beta_0 + \beta_1 X_i)/\sigma}{\Phi(\beta_0 + \beta_1 X_i)/\sigma}\right] \quad (6.29)$$

Thus, the desired marginal effects are then the derivative of Equation (6.29) with respect to x.

6.7.3 Decomposition Analysis

Decomposition analysis is used to determine the extent to which the factors influence the time allocation behaviour of boys and girls. This method follows the method of Basilio (2009). The decomposition is done for a pooled sample and then we isolate the element of the differences in hours of work aged 5-14 years and 15-17 years. The decomposition is explained by the differential in covariates from the element that are attributable to the returns of these covariates, in the same approach as the decomposition method proposed by Blinder (1973) and Oaxaca (1973). However, since the dependent

variable is censored, such that the marginal effects depend on the estimated variance of the error term, it is not appropriate to use the Blinder-Oaxaca linear model decomposition (Basilio, 2009). Thus, the procedure for Tobit models which is developed by Bauer and Sinning (2008) is used to decompose the mean difference of labour supply between boys (m) and girls (f). Following Bauer and Sinning (2008)[7], consider the following linear regression model, which is estimated separately for the groups $k = m, f$:

$$Y_{ik} = X_{ik}\beta_k + \varepsilon_{ik} \tag{6.30}$$

For $i = 1, \ldots., N_k$, and $\sum_k N_k = N$ and for these model, Blinder (1973) and Oaxaca (1973) propose the decomposition:

$$\bar{Y}_m - \bar{Y}_f = \Delta^{OLS} = [E_{\beta m}(Y_{im}|X_{im}) - E_{\beta m}(Y_{if}|X_{if}) + [E_{\beta m}(Y_{im}|X_{im}) - E_{\beta m}(Y_{if}|X_{if})]$$
$$= (\bar{X}_m - \bar{X}_f)\hat{\beta}_m + \bar{X}_f(\hat{\beta}_m - \hat{\beta}_f) \tag{6.31}$$

where, $\bar{Y}_k = N_k^{-1}\sum_{i=1}^{N_k} Y_{ik}$ and $\bar{X}_k = N_k^{-1}\sum_{i=1}^{N_k} X_{ik}.E_{\beta k}(Y_{ik}|X_{ik})$ indicates the conditional expectation of Y_{ik} evaluated at the parameter vector β_k. The first term on the right hand side of Equation (6.31) shows the difference in the outcome variable between the two groups due to differences in observable characteristics. The second term is the differential that is due to differences in coefficient estimates. In other words, the latter term can be interpreted as the gap in hours worked due to different labour supply behaviours of boys and girls. According to Alvarez and Miles (2003), this is referred as the "gender effect".

[7] An extension of the Blinder-Oaxaca decomposition to nonlinear regression models was developed by Bauer and Sinning (2008). The Blinder-Oaxaca decomposition method can be applied to models with discrete and limited dependent variables by using *nldecompose* in STATA. This command performs a Blinder-Oaxaca decomposition of the mean outcome differential of linear and nonlinear regression models, which calculates different variants of the decomposition equation.

Given X_{ik}, the linear model is a good approximation of the expected value of the outcome variable $E(Y_{ik}|X_{ik})$ for values of X_{ik} close to the mean. According to Bauer and Sinning (2008), if the outcome variable Y_{ik} is censored, however, the use of OLS may lead to biased estimates of the parameter vector and hence misleading results of the decomposition. By considering a tobit model, Bauer and Sinning (2008, pg. 2) illustrate the Blinder-Oaxaca decomposition for censored regression models, where the distribution of the dependent variable is censored from above at the point a_1 and from below at the point a_2:

$$Y_{ik} = X_{ik}\beta_k + \varepsilon_{ik}$$

$$Y_{ik} = a_1 \quad if \quad Y_{ik}^* \leq a_1$$

$$Y_{ik} = a_2 \quad if \quad Y_{ik}^* \geq a_2$$

$$Y_{ik} = Y_{ik}^* = X_{ik}\beta_k + \varepsilon_{ik} \quad if \quad a_1 < Y_{ik}^* < a_2 \tag{6.32}$$

$$\varepsilon_{ik} \sim N(0, \sigma_k^2)$$

The unconditional expectation of Y_{ik} given X_{ik} consists of the conditional expectations of Y_{ik} weighted with the respective probabilities of being censored or uncensored:

$$E(Y_{ik}|X_{ik}) = a_1\varphi_1(\beta_k, X_k, \sigma_k) + a_2\varphi_2(\beta_k, X_k, \sigma_k) + \forall(\beta_k, X_k, \sigma_k)\left[X_{ik}\beta_k + \sigma\frac{\gamma(\beta_k, X_k, \sigma_k)}{\forall(\beta_k, X_k, \sigma_k)}\right] \tag{6.33}$$

where,

$$\varphi_1(\beta_k, X_k, \sigma_k) = \varphi[\sigma_k^{-1}(a_1 - X_{ik}\beta_k)], \varphi_2(\beta_k, X_k, \sigma_k) = \varphi[\sigma_k^{-1}(a_2 - X_{ik}\beta_k)], \forall(.)$$

$$= \varphi_1(.) - \varphi_2(.) \; and \; + \forall(\beta_k, X_k, \sigma_k)$$

$$= \emptyset[\sigma_k^{-1}(a_1 - X_{ik}\beta_k)] - \emptyset\,[\sigma_k^{-1}(a_2 - X_{ik}\beta_k)] \; for \; k = m, f.$$

And, $\emptyset(.)$ represents the standard normal density function and $\varphi(.)$ is the cumulative standard normal density function. Particularly, in contrast to the linear regression model, the conditional expectations $E(Y_{ik}|X_{ik})$ in the tobit model depend on the variance of the error term, σ_k. Consequently, they are dependent on which σ_k is used in the counterfactual parts of the decomposition equation. Therefore, the two possible decompositions are:

$$\Delta_f^{Tobit} = \left[E_{\beta_{m,\sigma_m}}(Y_{im}|X_{im}) - E_{\beta_{m,\sigma_f}}(Y_{if}|X_{if}) + E_{\beta_{m,\sigma_f}}(Y_{if}|X_{if}) - E_{\beta_{f,\sigma_f}}(Y_{if}|X_{if})\right] \quad (6.34)$$

and

$$\Delta_m^{Tobit} = \left[E_{\beta_{m,\sigma_m}}(Y_{im}|X_{im}) - E_{\beta_{m,\sigma_m}}(Y_{if}|X_{if}) + E_{\beta_{m,\sigma_m}}(Y_{if}|X_{if}) - E_{\beta_{f,\sigma_f}}(Y_{if}|X_{if})\right] \quad (6.35)$$

where, $E_{\beta_k,\sigma_k}(Y_{ik}|X_{ik})$ now refers to the conditional expectation of Y_{ik} evaluated at the parameter vector β_k and the error variance σ_k for $k = f, m$. In particular, in both equations, the first term on the right hand side shows the part of the differential in the outcome variable between the two groups that is due to differences in the covariates X_{ik} and the second term the part of the differential in Y_{ik} that is due to differences in

coefficients. According to Bauer and Sinning (2008), the two versions of the decomposition equation may differ from each other, if large differences in the variance of the error term between the two groups exist. The decomposition using σ_f to calculate the counterfactual parts, as in Equation (6.34), is more comparable to the OLS decomposition described in Equation (6.31), since the counterfactual parts differ from $E_{\beta_{f,\sigma_f}}(Y_{if}|X_{if})$ only by using the parameter vector group m, β_m, rather than by using the parameter vector and the error variance for group m in the alternative decomposition described in Equation (6.35). Using the sample counterpart of Equation (6.33):

$$S(\hat{\beta}_k, X_{ik}, \hat{\sigma}_k) = N^{-1} \sum_{i=1}^{N} \Big\{ a_1 \varphi_1(\hat{\beta}_k, X_{ik}, \hat{\sigma}_k) + a_2 \varphi_2(\hat{\beta}_k, X_{ik}, \hat{\sigma}_k) + \forall a_1 \varphi_1(\hat{\beta}_k, X_{ik}, \hat{\sigma}_k) \left[X_{ik}\hat{\beta}_k + \hat{\sigma}_k \frac{\gamma(\hat{\beta}_k, X_{ik}, \hat{\sigma}_k)}{\forall(\hat{\beta}_k, X_{ik}, \hat{\sigma}_k)} \right] \Big\}$$

Thus, Equation (6.34) can be estimated by:

$$\hat{\Delta}_f^{Tobit} = [\, S(\hat{\beta}_m, X_{im}, \hat{\sigma}_m) - S(\hat{\beta}_m, X_{if}, \hat{\sigma}_f)] + [S(\hat{\beta}_m, X_{if}, \hat{\sigma}_f) - S(\hat{\beta}_f, X_{if}, \hat{\sigma}_f) \quad (6.36)$$

Similarly, equation (6.35) can be estimated by:

$$\hat{\Delta}_m^{Tobit} = [\, S(\hat{\beta}_m, X_{im}, \hat{\sigma}_m) - S(\hat{\beta}_m, X_{if}, \hat{\sigma}_m)] + [S(\hat{\beta}_m, X_{if}, \hat{\sigma}_m) - S(\hat{\beta}_f, X_{if}, \hat{\sigma}_f) \quad (6.37)$$

6.8 Empirical Results

The results presented here represent the results of Multiple Classification Analysis (MCA), followed by the results of tobit model and decomposition analysis in order to explain the gender gap in hours spent on particular activity between girls and boys.

6.8.1 Multiple Classification Analysis (MCA)

Table 6-7 shows the result for MCA for a pooled sample, and in urban and rural areas. In the analysis of variance, the predictors used in the analysis are mostly significant. In addition, there is some interaction effect between the pairs of independent variables, as given in Table 6A-2 of Appendix 6A: (i) wife's education and age at marriage, (ii) wife's education and having at least one son, where both were significant at 5% and 10% level, respectively. Table 6-7 illustrates the net effect of each predictor on the dependent variable, which controlling for the effect of other predictors and covariates, in married women aged below 50 years who had at least one living child. From the MCA table, it is noticed that predictors are found to have relatively stronger influence on 'desire' for future birth. As shown by the multiple R^2 values, the predictability of all the independent variables taken together without the covariates is low, which is only 5.7% of the variance was explained (all Indonesia).

Table 6-5: Multiple Classification Analysis of Desire for Future Birth and Selected Variables, 2007

Predictor Variables	**N**	**Unadjusted**		**Adjusted for Independents**		**Adjusted for Independents and Covariates**	
		Deviation	***Eta***	**Deviation**	***Beta***	**Deviation**	***Beta***
All							
Grand Mean = 0.55							
Women's education							
No Schooling	4311	-0.001		-0.005		-0.008	
Primary and Less	164	-0.126		-0.098		0.038	
Secondary and above	1660	0.014		0.022		0.017	
			0.044		0.040		0.054
Age at marriage							
≤ 15 years	367	-0.089		-0.086		-0.105	
16-18 years	1288	0.017		0.012		-0.082	
19+ years	4480	0.003		0.003		0.032	
			0.047		0.044		0.107
Having at least 1 son							
No	1948	0.169		0.168		0.078	
Yes	4187	-0.079		-0.078		-0.036	
			0.232		0.231		0.107
Multiple R^2					0.057		0.316
Multiple R					0.239		0.562

Table 6-5: Multiple Classification Analysis of Desire for Future Birth and Selected Variables, 2007 (*continued*)

Predictor Variables	N	Unadjusted		Adjusted for Independents		Adjusted for Independents and Covariates	
		Deviation	*Eta*	Deviation	*Beta*	Deviation	*Beta*
Urban							
Grand Mean = 0.52							
Women's education							
No Schooling	2628	0.002		-0.003		-0.006	
Primary and Less	81	-0.088		-0.067		0.099	
Secondary and above	544	0.004	0.028	0.022	0.028	0.014	0.035
Age at marriage							
≤ 15 years	105	-0.111		-0.109		-0.113	
16-18 years	504	-0.018		-0.018		-0.113	
19+ years	2644	0.008	0.045	0.008	0.044	0.026	0.108
Having at least 1 son							
No	1001	0.173		0.173		0.087	
Yes	2252	-0.077	0.231	-0.077	0.231	-0.039	0.116
Multiple R^2					0.056		0.324
Multiple R					0.236		0.570
Rural							
Grand Mean = 0.59							
Women's education							
No Schooling	1683	0.009		0.005		-0.004	
Primary and Less	83	-0.167		-0.133		-0.023	
Secondary and above	1116	-0.001	0.060	0.003	0.047	0.007 -0.106	0.048
Age at marriage	262	-0.104		-0.091		-0.063	
≤ 15 years	784	0.023		0.021		0.042	
16-18 years	1836	0.005		0.004	0.061		
19+ years			0.069				0.115
Having at least 1 son	947	0.163		0.160		0.067	
No	1935	-0.080		-0.078	0.227	-0.033	
Yes			0.231		0.060		0.095
					0.244		0.308
Multiple R^2							0.555
Multiple R							

Notes:

[a]The estimates of desire for future birth by education of women, women's age at marriage and having at least one son in a family.

[b]The estimates of desire for future birth by education of women, women's age at marriage and having at least one son in a family (with the covariates: the number of living children, number of children who had died and women's age).

However, the R^2 greatly increased to 31.2% when the additive effect of all the predictors and covariates was included. In addition, both values of R and adjusted R^2 were higher in urban areas than in rural areas.

The beta coefficients indicate that the level of importance or the magnitude of the contribution of the individual predictor, where the larger the value of *Beta*, the greater its effect on the 'desire'. Thus, the most important predictors explaining the variability in the dependent variable in order of prominence are: having at least one son, age at marriage and women's education. The percentage of variation in 'desire' explained by the predictors as well as the covariates was 56% and the grand mean of 'desire for future birth' for ever-married women was computed as 0.55, and the figure is higher in rural areas than in urban areas. In particular, the effects of women's education on 'desire for future birth' as indicated by *Eta* values are low. However, the effect increased from 0.04 to 0.05 (*Beta*) when adjusted for predictors and covariates, indicating a suppressing effect of women's education. In addition, the expected sign on the magnitude suggesting a lesser demand for additional children among educated women. This pattern is obvious in urban areas relative to rural areas.

The relationship between age at marriage and the 'desire for additional child' is linear and positive. The differences between ages at marriage groups were reduced when the conpounding effect of other independent and covariates were controlled. Nevertheless, the direction of the relationship remained unchanged. Specifically, the sign of the magnitude shows that relatively more women who married late wanted additional children than those who married at later age. The reason is due to the shorter reproductive span ahead of women who marry late and wish to complete their families

in a relatively shorter period of time (Ali, 1989). This effect is found to be higher in rural areas than in urban areas.

The presence of at least one son in a family shows a marked difference in the demand for additional children. The unadjusted figure shows that the probability of desiring more children was 25% less when the women had at least one son. The figure changed little when the other predictors were adjusted. Even though the *Beta* values of other predictors were adjusted decreasing when controlled the adjusted predictors and covariates, the values remain higher compares to others. This result reflects that the variable of son preference as used in this analysis remained the principal determinant for additional children even after controlling the effect of adjusted predictors and covariates.

6.8.2 Gender Differentials in Children's Time Allocation (Tobit Model)

Table 6-6 and Table 6-8 present the marginal effects of tobit model with the set of independent variables on the average number of hours spend according to the certain activity by the boys and girls children aged 5-14 years and 15-17 years, respectively. Table 6-8 reports the regression results of the hours spent on schooling. The results of hours devoted on doing housework are presented in Table 6-9, while the results of tobit model of hours spent on working are given in Table 6-10.

6.8.2.1 Marginal Effects of Individual and Household Characteristics on Hours Spent on Schooling per Week by Gender

Table 6-6 presents marginal effects of child, household and community characteristics on time spent on children's time allocation. The results suggest that being a girl

increases the time devoted to schooling activities by 0.47 hour per week for children aged 5-14 years and 1.22 hours per week for children aged 15-17 years with respect to males.

Table 6-6: Tobit (Marginal Effects) of Hours Spent of Children on Schooling

Explanatory Variables	Children Aged 5-14 years			Children Aged 15-17 years		
	All	Boys	Girls	All	Boys	Girls
Girls	0.4726**			1.2241**		
	(0.1839)			(0.5746)		
Age	12.7157*	12.7631*	12.7012*	-2.7758*	-1.2451*	-2.2629***
	(0.2658)	(0.3650)	(0.3876)	(1.9810)	(0.4030)	(1.6060)
Age Squared	-0.5736*	-0.5736*	-0.5753*	0.7509	0.0046	1.4615***
	(0.0138)	(0.0189)	(0.0201)	(0.5972)	(0.8269)	(0.8637)
Others	-0.1413*	-0.3721*	-0.0770*	0.2048	0.2424	0.2641
	(0.0219)	(0.1055)	(0.0314)	(0.6365)	(0.8947)	(0.8912)
Father-Stay	1.8778*	2.1393*	2.5576**	3.0050**	3.7495*	4.8120*
	(0.4394)	(0.6137)	(0.6283)	(1.2840)	(1.9050)	(1.7699)
Mother-Stay	-0.2952	-0.6645	0.7969	-2.3573	-2.8892	-0.6636
	(0.6759)	(0.9207)	(0.9917)	(1.5289)	(1.9195)	(2.5767)
Father's	0.2098*	0.2163*	0.2013*	0.1968*	0.4697*	0.1525*
Education	(0.0332)	(0.0449)	(0.0493)	(0.1031)	(0.1421)	(0.0153)
Mother's	0.1293*	0.1367*	0.1210**	0.1780*	0.1990*	0.1632**
Education	(0.0326)	(0.0439)	(0.0483)	(0.0947)	(0.1139)	(0.1397)
Household	0.0005*	0.0002*	0.0002*	0.0002*	0.0003*	0.0001*
Income	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Piped	0.0310*	0.3160*	0.2824*	0.5156	1.1625	0.0651
	(0.0102)	(0.0307)	(0.0323)	(0.6951)	(1.0078)	(0.9707)
Household	-0.0356	0.0178	-0.0932	0.0585	0.0328	0.0360
Size	(0.0334)	(0.0457)	(0.0488)	(0.0984)	(0.1377)	(0.1515)
	-0.5033	-0.5372	-0.4539	1.2651	1.0257	1.7021
Muslim	(0.3209)	(0.4364)	(0.4720)	(0.8247)	(1.1873)	(1.1527)
	-0.3388**	-0.5188**	-0.1685*	0.5122	0.7040	0.4347
Child (Aged	(0.1536)	(0.2137)	(0.0221)	(0.5588)	(0.7757)	(0.8002)
below 5)	-1.8562*	-1.8271*	-1.9069*	-2.4561*	-1.8592***	-3.1940*
Java	(0.2374)	(0.3227)	(0.3505)	(0.7749)	(1.0628)	(1.1244)
	2.6409*	2.5337*	2.7428*	4.8777*	5.3220*	4.7289*
Lesser Sunda	(0.3605)	(0.4817)	(0.5363)	(0.9284)	(1.3089)	(1.1327)
Islands	0.6037	0.3916	0.7744	1.4756	1.9188	-0.2026
Kalimantan	(0.4500)	(0.6372)	(0.6348)	(1.6340)	(2.2973)	(2.2223)
	-2.0668*	-2.3384*	-1.7882*	-2.8129**	-3.5787**	-1.3709
Sulawesi	(0.4116)	(0.5612)	(0.6029)	(1.2565)	(1.8256)	(1.9162)
Pseudo R^2	0.0596	0.0622	0.0573	0.0067	0.0105	0.0056
Number of Observations	9461	4843	4618	2502	1232	1270
Log-likelihood	-32249.520	-16342.813	-15898.637	-7001.114	-3481.804	-3503.284

Notes: *, **, *** statistically significance at 1%, 5% and 10%.

This suggests that girls are more likely to be in school compared to boys for both age groups. The higher increase in schooling hours is observed when fathers stay at home. In particular, the effect is larger for children aged 15-17 years, where the hours devoted to school increased by 3.7 hours per week for boys and 4.8 hours per week for girls. The levels of education of parents also increase the hours spent on schooling. The effects are greater by father's education compared to mother's education, for boys compared to girls and for older children compared to younger children. A small and significant effect is given by the household income for both groups.

Being a non-biological child of the head of the household have less time devoted to school and the same results are also given by the presence of child under 5 years in the household. Both these results are only significant for children aged 5-14 years, but not significant for children 15-17 years. In addition, household size and being a Muslim did not show any significant effects on the hours spent on schooling. In terms of region, children residing in Lesser Sunda Islands are more likely to allocate their time on schooling compared to children in Sumatera. Similarly, children residing in Java and Sulawesi are more likely to devote their time on schooling as opposed to their counterparts in Sumatera.

6.8.2.2 Marginal Effects of Individual and Household Characteristics on Hours Spent on Housework per Week by Gender

Table 6-7 presents marginal effects of different covariates on time spent on house work and gender is shown to be an important determinant of time spent on doing household chores. The results suggest that being a girl increases the time spent on house work by 1.26 hours per week compared to boys. Increase in age also increases the hours devoted

to house work by 1.09 hours for girls and 0.89 hours per week for boys. In addition, a non-biological child spent more time doing housework as opposed to a biological child, and the effect is larger for girls relative to boys.

Table 6-7: Tobit (Marginal Effects) of Hours Spent of Children on Housework

Explanatory Variables	Children Aged 5-14 years		
	All	**Boys**	**Girls**
Girls	1.2616*		
	(0.0510)		
Age	0.9920*	0.8914*	1.0925*
	(0.0824)	(0.1167)	(0.1242)
Age Squared	-0.0304*	-0.0286*	-0.0309*
	(0.0042)	(0.0059)	(0.0063)
Others	0.0057**	0.0126*	0.0146*
	(0.0025)	(0.0075)	(0.0010)
Father-Stay	0.3073*	0.0549	0.5584*
	(0.1145)	(0.1594)	(0.1746)
Mother-Stay	0.2953***	0.3478	0.2510**
	(0.1724)	(0.2267)	(0.1277)
Father's Education	-0.0351*	-0.0209	-0.0503*
	(0.0100)	(0.0137)	(0.0155)
Mother's Education	-0.0085	-0.0212	0.0052
	(0.0098)	(0.0135)	(0.0147)
Household Income	-0.0001***	0.0004	-0.0001*
	(0.0001)	(0.0005)	(0.00002)
Piped	-0.1769*	-0.0633	-0.3070*
	(0.0661)	(0.0940)	(0.0983)
Household Size	-0.0298*	-0.0413*	-0.0257*
	(0.0104)	(0.0139)	(0.0165)
Muslim	0.0313	0.2733***	0.3306**
	(0.1039)	(0.1472)	(0.1521)
Child (Aged below 5)	0.1998*	0.2254*	0.7925*
	(0.0488)	(0.0716)	(0.0704)
Jawa	-0.8995*	-0.8332*	-0.9993*
	(0.0688)	(0.0927)	(0.1072)
Lesser Sunda Islands	-0.2495**	-0.4538*	-0.0338
	(0.0985)	(0.1292)	(0.1597)
Kalimantan	-0.8484*	-1.0307*	-0.7337*
	(0.1116)	(0.1548)	(0.1754)
Sulawesi	-0.6815*	-0.7101*	-0.6763*
	(0.1176)	(0.1636)	(0.1779)
Pseudo R^2	0.0630	0.0467	0.0564
Number of Observations	9461	4843	4618
Log-likelihood	-14962.006	-6037.7031	-8886.875

Notes: *, **, *** statistically significance at 1%, 5% and 10%.

Both parents who stay in the household increase the hours spent on housework, which is significant for girls, but not for boys. The given effect is larger by fathers compared to mothers. Household income and having piped water in the household are negatively associated with the hours devoted to housework, which is also found to be significant only for girls. Girls and boys spend 0.04 hour per week and 0.03 hour per week respectively less on house work if there is an additional household member. This may be due the chores being divided equally among household members, which contributes to the less hours spent on house work among the available household members. Being a Muslim increases the hours work by 0.27 hours per week for boys and 0.33 hours per week for girls. The presence of children aged less than 5 years increases the hours devoted on house work by 0.23 hour per week for boys. The effects are larger for girls, where their hours increase by 0.79 hour per week since girls are more responsible for child care compared to boys. The region variables shows significant effects, where children in all listed islands spend fewer hours on house work compared to their counterparts in Sumatera.

6.8.2.3 Marginal Effects of Individual and Household Characteristics on Hours Spent on Working per Week by Gender

Table 6-8 shows marginal effects of independent variables on total hours spent in the labour force, and again the gender variable shows that being a girl decreases the time spent in the labour market by 1.13 hours per week and -1.77 hours per week for children aged 5-14 years and children aged 15-17 years, respectively. The effect of child's age on the hours spent in the labour market is significant for children aged 5-14 years, where the effects are larger for girls compared to boys.

Table 6-8: Tobit (Marginal Effects) of Hours Spent of Children on Market Work

Explanatory Variables	Children Aged 5-14 years			Children Aged 15-17 years		
	All	**Boys**	**Girls**	**All**	**Boys**	**Girls**
Girls	-1.1260*			-1.7662*		
	(0.1441)			(0.5967)		
Age	0.6266**	0.4653*	0.7957***	-18.1989	-18.4186	-12.1297
	(0.2515)	(0.2981)	(0.4198)	(19.3600)	(28.0180)	(27.2420)
Age Squared	-0.0008	0.0045	-0.0065	0.5732	0.6147	0.3476
	(0.0121)	(0.0143)	(0.0200)	(0.6066)	(0.8780)	(0.8527)
Others	-0.2129	-0.2675	-0.1429	-0.8816	-0.6261	-0.9128
	(0.1669)	(0.2152)	(0.2537)	(0.7018)	(1.0045)	(0.9668)
Father-Stay	-0.5112***	-0.9211*	-0.1003**	-4.4995*	-0.6145	-7.7097*
	(0.2734)	(0.3182)	(0.0477)	(1.4835)	(1.9130)	(2.1429)
Mother-Stay	-1.1111*	-1.7396*	-0.9964*	-2.8955***	-4.1390***	-0.4691
	(0.4209)	(0.4910)	(0.6785)	(1.7278)	(2.1986)	(2.6782)
Father's	-0.0879*	-0.1209*	-0.0865*	-0.2325**	-0.1237	-0.5259*
Education	(0.0256)	(0.0308)	(0.0410)	(0.1142)	(0.1545)	(0.1501)
Mother's	-0.0758*	-0.1245*	-0.1215*	0.1020	0.1550	0.0504
Education	(0.0279)	(0.0408)	(0.0407)	(0.1133)	(0.1408)	(0.1285)
Household	-0.0002**	-0.0002**	-0.0001**	-0.0001**	-0.0002*	0.0001
Income	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Piped	-0.2990**	-0.1899**	-0.4548*	0.2526	-1.8423***	-0.5651
	(0.1822)	(0.0230)	(0.2852)	(0.6955)	(1.0586)	(0.9194)
Household	0.0345	0.0298	0.0316	0.0009	0.0227	-0.0804
Size	(0.0247)	(0.0298)	(0.0388)	(0.1116)	(0.1523)	(0.1630)
Muslim	-1.2033*	-0.9798*	-1.5499*	0.2836	0.7208	-0.1331
	(0.2515)	(0.3275)	(0.3865)	(0.8866)	(1.2668)	(1.2438)
Child (Aged	0.2018	0.1298	0.3083***	0.5729	0.4482	0.7188
below 5)	(0.1266)	(0.1739)	(0.1764)	(0.6457)	(0.8671)	(0.9127)
Jawa	-1.0084*	-1.1695*	-0.7578**	-3.6256*	-3.9319*	-3.3536*
	(0.1785)	(0.2129)	(0.2933)	(0.8079)	(1.1122)	(1.1653)
Lesser Sunda	-0.0407	-0.4654	0.4266	4.0380*	5.3249*	2.8791***
Islands	(0.2265)	(0.2838)	(0.3603)	(1.0861)	(1.5030)	(1.5384)
Kalimantan	-1.2355*	-1.6654*	-0.7339	-2.1691	-3.2449	-1.4127
	(0.3179)	(0.4043)	(0.5040)	(1.5526)	(2.0102)	(2.4006)
Sulawesi	-1.0631*	-0.0898**	-1.5569*	-1.1086	-1.2815	-1.1982
	(0.2928)	(0.3366)	(0.5407)	(1.2679)	(1.9022)	(1.6945)
Pseudo R^2	0.0835	0.0964	0.0782	0.0048	0.0068	0.0053
Number of Observations	9461	4843	4618	2502	1232	1270
Log-likelihood	-3732.817	-1952.022	-1787.048	-10059.276	-5023.580	-5002.091

Notes: *, **, *** statistically significance at 1%, 5% and 10%.

Having fathers who stay at home largely decreases the hours among children aged 15-17 years, which is significant for girls. In particular, girls spend 7.71 hours per week if fathers stay at home. In contrast, boys spend 4.14 hours per week less if mothers stay at home. The years of education of both fathers and mothers, and household income

significantly reduce the hours spent on market work. The large effects are observed among boys as opposed to girls. In addition, having piped water in the household decreases the boys' hours spent in the labour market by 1.84 hours per week. This significant and large effect is observed among children aged 15-17 years. Children aged 5-14 years, who are Muslims spend 1.20 hours per week compared to non-Muslim. Furthermore, the presence of child aged under 5 years in the household significantly increases girls aged 5-14 years' hours of work by 0.31 hour per week.

6.8.3 Decomposition Results

The results of our decomposition analysis are summarized in Table 6-9 to Table 6-11 below. The estimates given here are using the boys behavioural response as the reference. The counterfactual scenario is in the absence of inherent differences in gender behaviour, girl's children with given characteristics will supply the same amount of work as boys with the same attributes are supplying.

Table 6-9: Decomposition of Schooling Hours Gaps

	Full Sample	**5-14 years**	**15-17 years**
Raw differential $(\hat{\Delta})$	-0.6622**	-0.6388**	-1.5643**
standard error (s.e.)	(0.2633)	(0.2688)	(0.7021)
Explained part	-0.0793	-0.0833	-0.0699
standard error (s.e.)	(0.1317)	(0.1405)	(0.1440)
% of $\hat{\Delta}$	12	13	4
Unexplained part	-0.5828**	-0.5555**	-1.4944**
standard error (s.e.)	(0.2286)	(0.2296)	(0.7146)
% of $\hat{\Delta}$	88	87	96

Notes: *, **, *** statistically significance at 1%, 5% and 10%.

The raw differential in schooling for the full sample is about 0.66 hours with girls displaying a greater hour attachment in schooling (Table 6-9). However, the gender gap in schooling which could be explained by differences in gender attributes did not show

significant results. The raw differentials are shown to be higher among children aged 15-17 years, with the gap of 1.56 hours. More than 80 percent of the gap remain unexplained. Thus, there are no significant gender differences in time of schooling between both genders.

Table 6-10: Decomposition of Household Chores Hours Gaps

	5-14 years
Raw differential ($\hat{\Delta}$)	-0.9812*
standard error (s.e.)	(0.2322)
Explained part	0.1162**
standard error (s.e.)	(0.0559)
% of $\hat{\Delta}$	12
Unexplained part	-1.0975*
standard error (s.e.)	(0.2300)
% of $\hat{\Delta}$	88

Notes: *, **, *** statistically significance at 1%, 5% and 10%.

The raw differentials shown in Table 6-10 in house work is 0.98 hours, which reflects that girls have more hours doing house work compared to boys. The factors significantly explaining the differences in hours spent on house work, account for 12 percent of the gap between girls and boys. This reflects that the hour's gap is explained by differences in gender attributes. The result suggests that there are significant gender differences in hours devoted for housework, among children aged 5-14 years. However, the balance of 88 percent remains unexplained in examining the gender differences in hours devoted to housework between girls and boys.

Finally, Table 6-11 displays the decomposition results on hours spent on market work between girls and boys, in both age groups. The raw differential in working for the full sample is about 1.83 hours with boys displaying a greater hour's attachment in market

work. However, if girls would have the same attributes, the gap in working would be decreased by 0.47 hour.

Table 6-11: Decomposition of Market Work Hours Gaps

	Full Sample	**5-14 years**	**15-17 years**
Raw differential ($\hat{\Delta}$)	1.8262***	-1.4410**	1.6901**
standard error (s.e.)	(1.0383)	(1.0213)	(0.8324)
Explained part	0.4724**	0.3873**	0.8540**
standard error (s.e.)	(0.3029)	(0.1680)	(0.1071)
% of $\hat{\Delta}$	26	27	51
Unexplained part	1.3538**	1.8283**	1.7756**
standard error (s.e.)	(0.9001)	(1.2081)	(0.8330)
% of $\hat{\Delta}$	74	73	49

Notes: *, **, *** statistically significance at 1%, 5% and 10%.

The raw differentials are shown to be higher among children aged 15-17 years, with the gap of 1.69 hours, while the gap of 1.44 hours given by children aged 5-14 years. In addition, the factors seem to matter more for explaining the differences in working hours, accounting for 27 percent and 51 percent for children aged 5-14 years and 15-17 years, respectively. It is also interesting to note that more than 50 percent of hours gap among children aged 15-17 years are explained by the gender attributes. Thus, this result indicates the significant gender differences in hours spent on market work. Overall, the result suggest there is significant gender differences in time allocation for both housework and market work, however, the gender gap is not significant in time allocated on schooling. Thus, the significant gender differentials observed in housework and working may reflect the existence of son preference, especially among children aged 5-14 years.

6.9 Conclusion

The purpose of this chapter is to investigate the gender preference by examining the behaviour of ever-married women of aged 15-49 years on their desire for future birth, whether the next birth is influenced by the presence of a son in the family. Next, we examine the gender differentials in hours spent on several activities for children aged 5–14 years and children aged 15–17 years in Indonesia, separately. The main hypothesis is girls have less leisure compared to the boys. The non-leisure time is allocated to employment activities (family farm business and paid or unpaid work), doing household chores and hours spent on schooling. In order to do that, Mutiple Classification Analysis (MCA) was utilized on ever-married women dataset, while tobit model were used on children dataset. Next, to investigate gender differentials in child labour, decomposition analysis is used. This method implemented the Indonesian Family Life Survey (IFLS) wave 4, which is conducted in 2007. The sample consists of 6,135 of ever-married women aged 15-49 years and 11,963 children aged 5-17 years.

Our findings suggest that gender composition of the children during the fertility period highly influences the demand for additional children. This is particularly true among women who do not yet have a son. Having at least a son in the family, getting married late, and higher level of education are factors which reduce the desire for future birth. Furthermore, it is clear that the variable of son preference (having at least one son) as used in the analysis remained the principal determinant for future birth even after controlling the effect of factors and covariates. Based on the model developed by Baland and Robinson (2000), the findings suggest that the difference between the average numbers of hours worked of the boys and the girls have a statistically differential effect on working and doing housework, especially among children aged 5-14 years. The results show that girls aged 5-14 years are more likely to spend more

hours on working and doing housework. However, for children aged 15-17 years, the results show that boys spend more time on working compared to girls.

Fathers staying at home significantly increase the hours spent on schooling. The same results are also shown by parent's years of schooling and household income for both children aged 5-14 years and 15-17 years. In particular, the effects are higher for girls compared to boys. In addition, having piped water in the household increase the hours devoted to schooling, while the presence of pre-school aged children in the household negatively relates to the hours spent on schooling. These two results are significant for children aged 5-14 years, but are insignificant for children aged 15-17 years. The effects of the variables in housework category and working category are found to be significant, mostly among girls compared to boys. For the housework category, fathers stay and mothers stay significantly increases the hours of girls on doing housework. In terms of parents' years of education, fathers' education significantly reduces the hours spent by girls on doing household chores. The similar effects are given by the household income and having piped water in the household. Both boys and girls spend fewer hours on doing housework if there is a presence of pre-school aged children in the household. These effects are larger for girls compared to boys.

Children aged 5-14 years spend fewer hours on working if both parents stay at home. The effects are significant for both girls and boys. For children aged 15-17 years, fathers stay at home shows a significant effect on girl's hours of working, while mother's stay at home have a significant effect on boy's hours spent on working. Father's education seem to reduce the hours of work for both genders of children aged 5-14 years, and for girls aged 15-17 years. Increase in household income and the availability of piped water in the household also shows a significant effect for boys and girls aged 5-14 years. However, among children aged 15-17 years, the effects are significant on boys, but not

for girls. Then, the decomposition method of the mean gender differences in weekly hours in schooling, housework and working was estimated to draw some conclusions as to the importance of gender wage differences in the time allocation of children. The decomposition model of Bauer and Sinning (2008) shows significant gender differentials in housework and working for children aged 5-14 years. However, there are no significant gender differences in schooling for both age groups and for children aged 15-17 years. These results confirm the existence of gender differences among younger children in their time allocation, and this reflects the prevalence of son preference as one of the reasons in explaining the differences.

Thus, promotion of policies such as providing opportunities and raising women's status would be a step in the right direction, especially in terms of returns to schooling and job opportunities. The condition that younger girls work more than the boys should be monitored as well, since they are still in school age, even though they only spend more time doing housework. Thus, increasing women's bargaining power may contribute the largest effect on reducing gender disparities. Undoubtedly, policies targeting gender-discriminatory attitudes by means of educational or further affirmative action policies are most desirable. The policies could help to increase the capacity of women to decide independently which in turn will lessen the influence of male dominance in household decision making.

APPENDIX 6A

Table 6A-1: Proportion of Additional Number of 'Desired' Sons by Married Women in Each Age Group in Urban and Rural Areas of Indonesia, 2007

Number of Wanted Children and Sons	Age Groups				All
	<25	25-34	35-44	45+	
All					
0 or 1 child	**0.32**	**0.58**	**0.10**	**0.00**	**0.70**
Sons: 0	0.31	0.59	0.10	0.00[a]	0.37
1	0.32	0.58	0.10	0.00[a]	0.33
2 children	**0.29**	**0.62**	**0.07**	**0.01**	**0.23**
Sons: 0	0.24	0.67	0.09	-[b]	0.24
1	0.31	0.61	0.07	0.01	0.31
2	0.27	0.65	0.09	-[b]	0.27
3 children	**0.15**	**0.74**	**0.10**	**0.01**	**0.07**
Sons: 0	0.31	0.54	0.08	-[b]	0.07
1	0.03	0.90	0.07	0.08	0.30
2	0.18	0.71	0.11	-[b]	0.50
3	0.25	0.58	0.17	-[b]	0.13
Urban					
0 or 1 child	**0.27**	**0.62**	**0.11**	**0.00**	**0.70**
Sons: 0	0.25	0.64	0.11	0.00[a]	0.38
1	0.29	0.59	0.12	0.00[a]	0.33
2 children	**0.25**	**0.68**	**0.07**	**0.00**	**0.22**
Sons: 0	0.23	0.68	0.09	0.00[a]	0.23
1	0.25	0.68	0.06	0.00[a]	0.25
2	0.24	0.68	0.09	-[b]	0.24
3 children	**0.22**	**0.70**	**0.07**	**0.01**	**0.08**
Sons: 0	0.17	0.83	0.00	0.00[a]	0.05
1	0.23	0.70	0.05	0.02	0.40
2	0.22	0.72	0.06	-[b]	0.45
3	0.18	0.55	0.27	-[b]	0.10
Rural					
0 or 1 child	**0.36**	**0.53**	**0.08**	**0.02**	**0.67**
Sons: 0	0.39	0.53	0.08	-[b]	0.35
1	0.33	0.53	0.08	0.05	0.32
2 children	**0.34**	**0.59**	**0.08**	**0.00**	**0.24**
Sons: 0	0.24	0.66	0.10	-[b]	0.24
1	0.38	0.54	0.08	0.00[a]	0.38
2	0.28	0.63	0.08	-[b]	0.28
3 children	**0.46**	**0.45**	**0.09**	-[b]	**0.09**
Sons: 0	0.50	0.33	0.17	-[b]	0.04
1	0.45	0.50	0.05	-[b]	0.30
2	0.49	0.41	0.10	-[b]	0.56
3	0.31	0.62	0.08	-[b]	0.09

Notes: [a] Ten or fewer case [b] No observed cases.

Table 6A-2: Analysis of Variance for Future Birth, 2007

Source of variation	df	Mean Square	F	Significance of F
All				
Main effects	5	17.374	74.510	0.000
a. Wife's education	2	1.467	6.293	0.002
b. Age at marriage	2	1.691	7.254	0.001
c. Having at least 1 son	1	80.551	345.457	0.000
2 –way interactions	8	0.388	2.665	0.072
a x b	4	0.366	2.589	0.080
a x c	2	0.784	3.361	0.035
b x c	2	0.206	0.881	0.414
3-way interactions				
a x b x c	4	0.127	2.544	0.074
Explained	17	5.322	22.826	0.000
Residual	6117	0.233		
Total	6134	0.247		
Urban				
Main effects	5	9.082	38.420	0.000
a. Wife's education	2	0.323	2.365	0.056
b. Age at marriage	2	0.803	3.395	0.034
c. Having at least 1 son	1	43.162	182.578	0.000
2 –way interactions	8	0.185	2.784	0.067
a x b	4	0.165	3.700	0.032
a x c	2	0.298	1.262	0.283
b x c	2	0.169	0.715	0.489
3-way interactions				
a x b x c	4	0.070	2.297	0.080
Explained	17	2.775	11.739	0.000
Residual	3235	0.236		
Total	3252	0.240		
Rural				
Main effects	5	8.303	34.627	0.000
a. Wife's education	2	1.236	5.422	0.004
b. Age at marriage	2	1.553	6.815	0.001
c. Having at least 1 son	1	35.935	157.660	0.000
2 –way interactions	8	0.339	2.486	0.077
a x b	4	0.370	1.623	0.166
a x c	2	0.564	2.476	0.084
b x c	2	0.151	2.664	0.074
3-way interactions				
a x b x c	4	0.144	3.630	0.029
Explained	17	2.635	11.561	0.000
Residual	2864	0.228		
Total	2881	0.242		

APPENDIX 6B

Table 6B-1: Summary Statistics of Explanatory Variables of All Children, Children Aged 5-14 years and Children Aged 15-17 years by Gender

Explanatory Variables	All Children	Children Aged 5-14		Children Aged 15-17	
		Boys	Girls	Boys	Girls
Age	10.62	9.26	9.34	15.96	16.04
	(0.04)	(0.04)	(0.04)	(0.03)	(0.03)
Years of Schooling	6.44	5.51	5.70	9.74	9.97
	(0.03)	(0.04)	(0.04)	(0.08)	(0.08)
Others	0.27	0.24	0.27	0.27	0.34
	(0.004)	(0.006)	(0.006)	(0.01)	(0.01)
Father-Stay	0.90	0.90	0.90	0.89	0.85
	(0.003)	(0.004)	(0.005)	(0.01)	(0.01)
Mother-Stay	0.97	0.97	0.98	0.91	0.97
	(0.002)	(0.002)	(0.002)	(0.009)	(0.005)
Level of Education: Father	7.88	8.11	7.94	7.33	7.21
	(0.04)	(0.07)	(0.07)	(0.14)	(0.14)
Level of Education: Mother	7.65	7.88	7.76	6.46	7.40
	(0.04)	(0.06)	(0.06)	(0.13)	(0.15)
Household Income	1908.05	1845.59	1883.99	2103.98	2067.54
	(37.05)	(53.22)	(58.60)	(157.94)	(112.75)
Household Size	6.71	6.63	6.70	6.98	6.81
	(0.03)	(0.05)	(0.05)	(0.10)	(0.11)
Child (under 5 years)	0.44	0.46	0.48	0.29	0.33
	(0.006)	(0.009)	(0.01)	(0.02)	(0.02)
Piped	0.22	0.22	0.23	0.20	0.25
	(0.004)	(0.006)	(0.007)	(0.01)	(0.01)
Muslim	0.90	0.90	0.90	0.89	0.89
	(0.003)	(0.005)	(0.005)	(0.01)	(0.01)
Sumatera	0.23	0.25	0.22	0.23	0.23
	(0.004)	(0.007)	(0.007)	(0.01)	(0.01)
Java	0.54	0.53	0.54	0.54	0.55
	(0.005)	(0.008)	(0.008)	(0.02)	(0.02)
Lesser Sunda Islands	0.12	0.11	0.12	0.13	0.12
	(0.003)	(0.005)	(0.005)	(0.01)	(0.01)
Kalimantan	0.05	0.05	0.05	0.04	0.04
	(0.002)	(0.003)	(0.003)	(0.006)	(0.006)
Sulawesi	0.06	0.06	0.06	0.05	0.06
	(0.002)	(0.004)	(0.004)	(0.007)	(0.008)

Note:

1. Father's and mother's schooling are reported in the number of years of schooling, same as years of schooling for children, which is range from 0 = no schooling and 18 = 18 years of schooling.
2. Household income is divided by IDR10,000.

Table 6B-2: Summary Statistics of Explanatory Variables of Children Aged 5-14 years by Activity

Explanatory Variables	Activity		
	Schooling	**Housework**	**Working**
Girls	0.51	0.63	0.47
	(0.01)	(0.01)	(0.02)
Age	9.99	10.73	11.91
	(0.03)	(0.04)	(0.09)
Years of Schooling	6.67	6.70	7.19
	(0.02)	(0.03)	(0.07)
Others	0.27	0.27	0.27
	(0.01)	(0.01)	(0.02)
Father-Stay	0.90	0.89	0.88
	(0.003)	(0.005)	(0.01)
Mother-Stay	0.97	0.97	0.98
	(0.002)	(0.003)	(0.01)
Level of Education: Father	8.06	7.70	6.66
	(0.05)	(0.008)	(0.18)
Level of Education: Mother	7.85	7.58	6.57
	(0.04)	(0.07)	(0.17)
Household Income	1841.37	1707.35	1562.14
	(41.49)	(67.55)	(78.65)
Household Size	6.45	6.48	7.03
	(0.03)	(0.05)	(0.12)
Child (under 5 years)	0.47	0.48	0.47
	(0.01)	(0.01)	(0.03)
Piped	0.22	0.21	0.18
	(0.005)	(0.007)	(0.02)
Muslim	0.90	0.90	0.81
	(0.003)	(0.005)	(0.02)
Sumatera	0.23	0.29	0.33
	(0.005)	(0.008)	(0.02)
Java	0.55	0.49	0.39
	(0.006)	(0.009)	(0.02)
Lesser Sunda Islands	0.11	0.13	0.19
	(0.004)	(0.006)	(0.02)
Kalimantan	0.05	0.04	0.03
	(0.002)	(0.003)	(0.007)
Sulawesi	0.06	0.05	0.05
	(0.003)	(0.004)	(0.009)

Note:

1. Father's and mother's schooling are reported in the number of years of schooling, same as years of schooling for children, which is range from 0 = no schooling and 18 = 18 years of schooling.
2. Household income is divided by IDR10,000.

Table 6B-3: Summary Statistics of Explanatory Variables of Children Aged 15-17 years by Activity

Explanatory Variables	Activity	
	Schooling	**Working**
Girls	0.51	0.48
	(0.01)	(0.01)
Age	15.99	15.97
	(0.02)	(0.02)
Years of Schooling	9.85	10.37
	(0.05)	(0.05)
Others	0.30	0.29
	(0.01)	(0.01)
Father-Stay	0.85	0.85
	(0.007)	(0.008)
Mother-Stay	0.92	0.92
	(0.005)	(0.006)
Level of Education: Father	7.44	7.25
	(0.10)	(0.09)
Level of Education: Mother	7.09	6.99
	(0.09)	(0.10)
Household Income	1998.62	1973.47
	(89.33)	(89.61)
Household Size	6.48	6.46
	(0.07)	(0.07)
Child (under 5 years)	0.31	0.29
	(0.01)	(0.01)
Piped	0.23	0.24
	(0.01)	(0.009)
Muslim	0.89	0.88
	(0.01)	(0.007)
Sumatera	0.23	0.23
	(0.008)	(0.009)
Java	0.55	0.53
	(0.01)	(0.01)
Lesser Sunda Islands	0.12	0.13
	(0.006)	(0.007)
Kalimantan	0.04	0.04
	(0.004)	(0.004)
Sulawesi	0.06	0.06
	(0.005)	(0.005)

Note:

1. Father's and mother's schooling are reported in the number of years of schooling, same as years of schooling for children, which is range from 0 = no schooling and 18 = 18 years of schooling.
2. Household income is divided by IDR10,000.

CHAPTER 7: CONCLUSIONS

Child labour is one of the universal concerns that affect boys and girls in most developing countries and has attracted the interest of researchers and policy makers alike. According to Acred (2014), child labour prevents children from going to school and gaining literacy skills, especially for children in remote and rural areas. In addition, even though schools are available, they might not be free (hidden costs such as buying uniforms, textbooks and stationery). Poverty forces many children to work, which keeps millions of children out of school every day. In addition, child labour problem is also perpetuated by exploitation, lack of access to quality education and social protection, conflict, natural disasters and discrimination. There appears to be a consensus regarding regulations that can be put in place in order to eradicate the problems effectively without reducing the welfare of children's households. In order to achieve this, there is a need to understand both the supply and demand side determinants of child labour. There are also the policies and legislation that have been implemented in the respective countries. However, the impact of these policies requires further study.

This thesis examined the issue of child labour in Indonesia. The first three empirical chapters (Chapter 3 to Chapter 5) used individual level datasets for the year 2005 and 2007 from the National Socioeconomic Surveys (SUSENAS). Chapter 3 focused on the analysis of child labour, which is defined simply as children who work and do not work, regardless of other activities during the week. The finding from the probit model

suggests that younger children are less likely to be sent to work compared to older children. In addition, head of households plays an important role on the decision-making process in the household. The magnitude of child labour increased slightly over the two years, and most children were found to be working as casual workers and unpaid workers. It was also found that boys are more likely to work compared to girls, as their workload increases as they get older. Sons and daughters of the head of the household have the advantages of being sent to school, and other children have a higher probability of being sent to work. A well-educated head of household is less likely to send their children to work. In addition, the parents of children who are unpaid or casual workers influence their children to follow the same steps as their parents did. The probability of working children is higher among children in rural areas than in urban areas. A large number of households faced financial constraints, and this condition causes school-age children to go out and find alternative sources of income. We also found some evidence to support the luxury axiom, and this suggests a transition in the motivation to work over the two-year period.

Even though the law in Indonesia permits children aged 14 to do light work, most child workers were still school-age children (age of 6-15 years). Therefore, Chapter 4 extended the analysis in Chapter 3 and examined the working and schooling decisions simultaneously using the same data. In terms of gender, girls are more likely to go to school and boys are more likely to go to work. Since daughters have the advantage of not being sent to work as evidenced in Chapter 2, our findings in this chapter support that daughters are sent to school rather than to work, especially in urban areas. Our results have revealed evidence of altruism in female-headed households towards girls. This is confirmed by the significant decline in the probability of working and the

increase in the probability of schooling for girls overtime. However, there was no significant finding regarding both of these probabilities for boys. Boys with employees and unpaid workers as parents are more likely to go to work than to school. The same pattern was observed among girls; however, an opposite situation was shown for heads of households and spouses who work as employees and casual workers. We also found evidence to support the luxury axiom in this chapter, which reaffirmed our findings in Chapter 2. In terms of children's rankings in the household, later children have a higher probability of being sent to school, while first-born children are more likely to be sent to work. This might occur because first-born children are required to work in order to help their parents, especially if they have school-age siblings that need financial support. Land ownership variables were included in the model, which revealed a weak effect in 2005. Households who privately own paddy land have significantly higher effects on the probability of boys working in urban areas. The probability of school increased as the size of privately owned land but managed by others increased. A significant effect was observed for girls, but not for boys. In addition, no significant effect on both probabilities was shown by households who privately owned dry land. Thus, this demonstrates that land ownership does not strongly influence the family decision-making process, especially the decision to send children to work.

Parents value the current consumption of household and human capital attainment of children. If a child is sent to work, he or she is likely to receive less education, which results in lower earnings in the future. Thus, children's time can be allocated into different activities, where a child can only go to school, work, or can combine work and school or can do neither work nor school. Chapter 5 analysed factors that influence

a household's decisions regarding four alternatives available for children's non-leisure time allocation. The probability of work only, work and school and neither work nor school increases as a child gets older, and the probability of school only shows the opposite pattern. Huge increases in the rates are shown by the probability of work and school over time. In addition, labour participation rates for boys decreased more than girls, and there was an evidence of the gender gap in education becomes smaller over time. Spouse's characteristics are found to have a significant impact on household's decision making process for girls' time allocation, and also a relationship, although not as strong as between the head of the household's characteristics and boys' time allocation. Instead of reducing the probability of working, household income was also found to be significant and negatively associated with the probability of combined work and school and neither work nor school relative to school only. We also found complementarity between father's employment and child's working in rural areas. Furthermore, improved drinking water and sanitation and having source of electricity reduced the probability of combining work and school, work only and being idle relative to school only. This result suggests that the probability of child labour can be reduced by improving the socioeconomic status of a household and community. Land ownership has a significant impact on the probability of work and school. However, it has a weak impact on the probability of work only and neither work nor school.

A gender gap was observed among children in their activities, which may reflect the existence of parents' gender preferences in the household. Generally, gender preference is most widespread in South Asia to East Asia because of a wide range of religious and cultural transitions prevailing in this region, and Indonesia is one of the countries located in the region. Chapter 6 investigated the gender preference among

ever-married women aged 15-49 years based on their desire for future birth. The result revealed the existence of son preference among women who have not yet had a son compared to women who have at least one son in a family. Next, by making use of a tobit model and the Indonesia Family Life Survey (IFLS4), we examined gender differentials in hours spent on non-leisure activity of children aged 5-14 years and 15-17 years. The main objective is to test whether the differentials are explained by the existence of son's preference in the household. In particular, girls are expected to have less leisure time than boys since they are more likely to undertake household chores. The hours spent on housework and market work confirmed that girls have less leisure than boys, especially for children aged 5-14 years. Therefore, the marginal rate of return for girl child labour was higher than that of the boys. The gaps between boys' and girls' working hours are statistically explained by gender differences. Moreover, the gap in working hours of children aged 15-17 years was not statistically explained by gender differences. The presence of a father reduces the working hours of girls aged 15-17 years, while the presence of a mother reduces the working hours of boys aged 15-17 years. As demonstrated in Chapter 4, education plays a significant role in reducing the problem of working children. Household income significantly reduced the hour's work of boys and girls aged 5-14 years and boys aged 15-17 years in doing housework and working. This reaffirms that the motivation of older children going to work is to find extra sources of income to help their families make ends meet. Our findings also reflect the presence of altruism in fathers towards sons and in mothers towards daughters. Decomposition analysis gives a significant gender gap among younger children compared to older children, especially on the hours spent on household chores and market work. This suggests that son's preference may be one of

the factors in explaining the observed gender differential in non-leisure time allocation. However, there is a need for continued exploration of the mechanisms that determine son preference and gendered economic behaviour more generally in Indonesia. In summary, based on the findings from the first three chapters, the results of the empirical studies suggest that the incidence of child labour increased slightly over the two-year period from 2005 to 2007, and was accompanied by a corresponding rise in the participation in combining work and school. We have found some support for Basu and Van's (1998) luxury axiom (a family will send their children to work only if the family's income from non-child labour sources drops very low) in both years of the survey, which might suggest the motivations behind children working. In addition, parent's education, household size, birth order, sibling composition and having access to basic services are statistically significant and negatively associated with the probability of working and neither work nor schooling. Thus, children are more likely to go to school and combined work and school. However, land ownership does not strongly affect child's work and schooling overtime.

There is an educational policy that provides funding to reduce child labour by giving subsidies for education, and thereby will encourage children to go to school. Therefore, it will increase the school enrolment rate of children either in primary or secondary level and reduce the gap between boys and girls. In addition, the Government of Indonesia also provides additional income to parents through the direct cash transfer programme. However, the programme is unsuccessful in reducing the incidence of child labour. Thus, we conclude that our analysis of child labour implies certain policy recommendations. A better implementation of rules, laws and regulations should be enforced, including raising the minimum age for work, especially for those working in

agricultural and domestic sectors. Even though the minimum age that is allowed to work is set at 15 years, 15-17 years old are still considered as children. Although the Government of Indonesia has enforced a law in which individuals must complete nine years of education, the implementation is less successful, especially in rural areas. The availability of basic services in each region helps to reduce the probability of working and being 'idle'. Thus, it is the responsibility of local authorities to provide basic services to residents in their region. In addition, the number of school does not affect the decision whether the child was sent to work, to school, or neither. Thus, the Ministry of Education should find a way of providing better educational infrastructure and review indirect costs to ensure all levels of society can afford to send their children to school. Finally, each individual plays an important role in helping the government to overcome the incidence of child labour by strengthening the social security nets to protect the vulnerable in the economy. In addition, the improvement of women's status and education and the importance of raising the value of girls in society should therefore become policy requirements, and this might help in reducing the gender gap between boys and girls. In terms of education, schools can promote gender-sensitive curricula, thus expanding educational and occupational opportunities for girls in order for girls to be perceived as important and desired. Finally, since this thesis only covers the supply-side of child labour and limited datasets are available, further researches are required to include the demand-side of child labour and other factors such as trade, capital market and migration on getting a comprehensive understanding on the incidence of child labour.

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